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NAVAL POSTGRADUATE SCHOOL

Monterey, California

APPLICATION OF ACOUSTIC SIGNAL
PROCESSING TECHNIQUES TO SEISMIC DATA

by

Cynthia E. Irvine

June 1977

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NAVAL POSTGRADUATE SCHOOL
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Application of Acoustic Signal Processing Techniques
to
Seismic Data

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Abstract

In order to obtain an effective discriminant between earthquakes and explosions, techniques which originally had been developed for acoustic signal processing have been applied to seismic data. These techniques include Fourier analysis and related applications software as well as interactive graphics displays of the data. A numeric has been obtained which may provide a useful discriminant between earthquakes and explosions.

In conjunction with this investigation, a large amount of seismic data has been consolidated. These data are discussed.

Keywords: signal processing, seismology, detection, discrimination

I. Motivation

An effective system used to monitor nuclear testing by all members of the world community is a prerequisite to obtaining a meaningful treaty to either limit or ban nuclear testing. Clearly, unrestricted on-site inspection by an unbiased group of observers provides a most effective way of assessing the activities of all parties involved. Regretably, the competitive aspect of human nature may render this method of investigation useless and reliable alternative techniques must be found to monitor clandestine nuclear testing.

The measurement of the density of certain radioactive materials in the atmosphere has been used as an indicator of nuclear test activity. Atmospheric testing or leakage from underground tests can cause a detectable increase in the atmospheric abundance of radioactive waste products. By following the movement of these radioactive clouds, it is possible to localize their origin. Atmospheric evidence will be nugatory when an underground test is completely contained.

Cratering, a by-product of surface testing or the subsidence of chimneys produced in underground tests, may be visible on some satellite photographs. However, cratering can be caused by natural processes and by various non-nuclear man-made projects or it can go undetected.

The detection of seismic signals caused by explosions

provides yet another means of monitoring nuclear test activities. Not all seismic signals resulting from explosions can be detected. Seismic signals are detectible from both subterranean and surface explosions. The Baker test in the Bikini atoll in July 1946 was fired underwater. Detectors in California recorded the event. The transfer of energy from surface tests to seismic waves is only partial (Richter 1958). Some explosions are too small to be detected and others are indistinguishable from natural seismic events such as small earthquakes or rockslides.

This report presents the results of a program to improve the reliability of the seismic detection of nuclear explosions. A seismic monitoring system for explosions must satisfy three objectives: first, each event must be detected above random noise; second, it must be located; and, finally, it must be distinguished from naturally occurring seismic activity.

II. Review

Consider some of the facts known about earthquakes and explosions and their detection at teleseismic distances.

Seismic events are characterized by a variety of waves emanating from their foci. The three most powerful and best known of these waves will be reviewed.

The first signals from a seismic event to arrive at a distant detector are the undae primae or P waves. Vibrating in the direction of propagation, these longitudinal or "compressional" waves are able to penetrate the earth's crust, mantle , and liquid core.

Undae secundae, S waves, propagate at a lower speed than P waves. They cause transverse or "shear" motion in the surrounding medium; in other words, they set up oscillations perpendicular to their direction of propagation. Because of their transverse nature, S waves are unable to propagate through liquids and do not penetrate the earth's core.

The third type of seismic wave has been given the name surface wave because it travels along the surface of the earth rather than deep in its interior. They are guided waves following a channel between two discontinuities one of which is the earth's surface. The other is the Mohorivicic discontinuity. It delimits the base of the continental crust and is a point where S and P waves undergo dramatic

velocity changes due to a transition in the elastic properties of the medium.

It is necessary to point out that not all types of seismic waves are seen with the same relative strengths for all types of seismic events. Typical earthquakes are caused by slipping or "shearing" along a fault. Thus the S or "shear" waves resulting from an earthquake are quite strong. The situation for explosions is quite different. They are essentially point source impacts and show a marked reduction in strength of the S waves relative to the P waves. In addition, surface waves from explosions are often imperceptible. The ratio of P wave energy to S wave energy or the ratio of compressional waves to surface waves can provide an indication of the properties of the generating event (Leet 1962; Lacoss 1969). Unfortunately, the relative amplitudes of the different types of waves do not yield a foolproof discriminant between earthquakes and explosions. A large explosion near the earth's surface may cause strains which will produce S waves. Also, since the amplitude of surface waves is proportional to exp (-H), where H is depth, many deep focus earthquakes show no surface waves.

The detection of an event will depend upon the amplitude of the signal received by the seismometer. If the signal is small and the detector insensitive, then, without the proper use of signal processing techniques, the event may pass unnoticed. It is possible that the detector has not been "tuned" to the dominant frequency of the signal, or that the

detector and subsequent processing filter out useful information at certain frequencies. For small events, the balance will be weighted against detection.

The amplitude of the signal received is proportional to the energy or yield of the event. However, the correlation is not exact since there is a strong dependence of the amplitude of the seismic signal upon the type of material in which the event originates. Consider alluvium, an example of which is the material deposited in river beds. Ten times the explosive energy will be required by an event occurring in alluvium to produce the same effect at the detector as an event occuring in granite (Bullard 1966). Since the signal can also be attenuated by the material in which the seismometer is embedded, its location at a geologically favorable site enhances the likelihood of detecting small events.

Another factor influencing the detection of seismic signals is background noise. This can be quite significant in heavily populated areas, where trucks, trains, construction and many other aspects of human activity pump noise into the ground. Isolated areas are by no means all free of high levels of background noise. The pounding of the surf in coastal areas or the transmission of wind energy into the ground by forests can also introduce significant amounts of background noise. Many sources of microseismic noise appear to be unavoidable. The evidence suggest that large weather systems cause an increase in microseismic noise.

To minimize both noise and attenuation, detectors are best located toward the centers of continents, often in regions of granite. LASA, the Large Aperture Seismic Array, located near Billings, Montana, is a good example of a modern seismic detection system. Instead of merely one seismometer, it consists of 21 clusters or subarrays each containing 25 seismometers. Its diameter is 200 kilometers. Each seismometer is buried approximately 61 meters underground to minimize the effects of surface noise. Presently only 13 of the subarrays are in use. Because it is so large, it takes a measurable time for signals from many Eurasian sites to traverse the LASA array. It is possible to calculate time shifts in the data recieved at each seismometer so that the entire array appears to be "steered" in a particular direction.

Discrimination of explosions from earthquakes can usually be accomplished by a combination of the four methods discussed below.

A. Location of the event

The velocity of seismic waves through the earth is finite; therefore, a more distant seismometer will receive the signal from an event after a nearer one. With data from several seismometers or seismic arrays scattered about the earth, triangulation methods can be used to locate an event. Inaccuracies in location are contributed to primarily by local irregularities in seismic velocities caused by

variations in conditions of the earth's upper crust and mantle. Each detector may be located in geologically dissimilar regions and the rocks beneath the event itself may have different propagation velocities in different directions.

Not all regions of the earth have the same seismicity. The "ring of fire" or circum-Pacific belt defines a very active region. Hardly a year passes without an earthquake or volcano wreaking havoc in one of the many countries fronting on the Pacific. Other regions are seismically inactive and include the Canadian shield, the Brazillian shield, western Australia, the Angara shield of northern Asia, and most of Africa. (Dott and Batten 1976). An event located in one of these stable areas must be suspected of being an explosion. Of course, location alone is insufficient to determine the nature of the event, but, when combined with other data, it often provides strong circumstantial evidence for discrimination.

b. Complexity of the signal

Explosions are basically simple events. A force emanating from the explosion's focus impacts upon the surrounding meduim causing the propagation of seismic energy through the earth. Their spatial and temporal locations can be well defined. On the other hand, earthquakes are rather complex. The event occurs along a fault which may be many kilometers in length and is not instantaneous at every point along the

fault.

The complexity of the signal received at the seismometer is often an indication of the genre of the original event. An explosion usually has a very simple signature while those of earthquakes are much more complex. This method is not foolproof. A nebulous zone of simple earthquakes and relatively complex explosions clouds discrimination.

C. Depth

Depth also provides a means of distinguishing the two types of events. The deepest earthquakes occur 750 kilometers beneath the earth's surface and about 30 percent of all earthquakes take place at depths below 50 kilometers. It would be impractical if not impossible to drill holes of that depth in which to place explosive charges. Unfortunately, depths for shallower earthquakes sometimes cannot be determined with the accuracy necessary to enable their discrimination from explosions.

D. Relative strengths of S, P, and surface waves

As mentioned previously, the S and surface waves are not strong in explosions and thus there is a third criterion by which earthquakes and explosions can be distinguished. This too is an imperfect method, particularly when working at or near the limits of the detectors. S and surface waves can be buried in noise and earthquakes may be indistinguishable from explosions. Several methods have been postulated which

can be used to evade or obfuscate detection of nuclear testing. One technique used to diminish the apparent amplitude of an explosion is to set the charge off in a large cavity. As in the case of a surface test, less energy is transmitted to the ground. By setting several explosions off along a line and in a well timed sequence, it is possible to increase the complexity of the signal recieved sufficiently to make it appear like an earthquake.

In this paper a possible new method for distinguishing explosions from earthquakes will be presented. It does not depend upon depth, the detection of S or surface waves, or the appearance of the P waves in the time domain. Through examination of the P wave signatures in the frequency domain it has been shown that the energies delivered in certain frequency intervals differ for earthquakes and explosions. By taking advantage of these differences, a numerical discriminant was developed.

The report includes a discussion of the data received, its value as a large collection of seismic events, and questions regarding its integrity.

III. Equipment

The Computer Laboratory of the Naval Postgraduate School is designed to provide the equipment necessary to conduct research in the areas of digital signal processing and computer science. A number of computers within this laboratory were used for this project.

A. Adage AGT-10

Designed for interactive graphics display, the Adage AGT-10 system consists of a display screen which is refreshed 40 times per second, a main computer with 16K of memory, a disk drive for additional storage, and a teletype. A set of 16 function switches, a joystick, six control dials, a lightpen, and foot pedals allow a variety of user interactions. Its 30 bit word length and well designed programming language make program execution rapid. Thus there is little perceptible delay between an interactive command and its product on the screen.

With an interface to the SDS 9300, it is possible to obtain interactive graphics display of large signal processing programs.

B. SDS 9300

The Scientific Data Systems SDS 9300, is a medium sized second generation computer. It was the nucleus for the majority of the signal processing done for this research. It has a 1.75 microsecond cycle time, 24 bit words, and 32K of

memory. Included among its peripherals are: two seven-track tape drives, a card reader, a line printer, a drum for mass storage, and a teletype. This computer is interfaced to the Adage AGT-10, the CSP-125, and the Comcor CI-5000, all of which were used.

Languages available to SDS 9300 users are FORTRAN and an assembly language called Metasymbol. Because of its many interfaces, a variety of FORTRAN callable subroutines is available for intercomputer communications.

C. CSP-125

The CSP Incorporated CSP-125 is a 16 bit digital computer with a cycle time of one hundred nanoseconds. It is designed to rapidly perform the calculations necessary for signal processing of massive quantities of data. Of its 16K of memory, 4K consists of logically equivalent IC and core memory. Through its interface with the SDS 9300, the CSP-125 can be sent time data. The transform is computed in the CSP-125 and the spectrum is delivered to the SDS 9300.

The CSP-125 has the capibility of doing transforms either through software or its hardware box. Due to scaling problems, the latter has not been used extensively.

D. Comcor CI-5000

A hands-on analog computer is available to users of the laboratory facilities in the form of the Comcor CI-5000. Programming is done on patchboards. The use of the CI-5000

in this research was quite limited and very simple. By using its interface with the SDS 9300, chart recordings of the digitized time data were obtained.

E. PDP 11/50

The PDP 11/50 is a state of the art fourth generation 16 bit digital computer built by the Digital Equipment Company. The system at the Naval Postgraduate School is more complex than that found at other installations since two PDP 11/50's share a section of common memory and acess three 80 megabyte disc drives through a dual port controller. The UNIX timesharing system developed at Bell Laboratories is currently being used. Because these computers have been subjected to extensive on-going system developement, they did not provide a secure environment in which to undertake a project involving a large data base.

One of the peripheral devices to the PDP 11/50 system is the Versatec Printer/Plotter. It was ideal for obtaining hardcopy of the graphics displays of the AGT-10. The necessary software was written so that an output tape from the SDS 9300 could be mounted on the PDP 11/50 and the display data plotted with the Versatec.

IV. Software

A series of computer programs was written or modified to allow a large data sample to be analyzed. In this section a brief description of this software is given. For more details about each program, the reader is referred to Appendix A.

A. READDATA

This program was written to transcribe the BCD data tape provided by ACDA into a more compact binary form which was also compatible with existing signal processing and display programs.

A standard header record was designed and all signal processing programs were written or modified to conform to the universal header record.

B. DSO

Designed to display the unprocessed seismic waveforms, the Digitally Simulated Oscilliscope or DSO program takes full advantage of the interactive features of the SDS 9300/AGT graphics system. With the capibility of handling up to ten seismograms simultaneously, its options are selected by using the function switches on the AGT-10 and include: namelist, timesweep, amplitude scaling, trigger, variable timebase, and spotlight.

C. DXD

Essentially the same as DSD except for changes in the input parameters and data, the Digital Transform Display or DXD allows the simultaneous display of as many as ten transforms. Transforms are read into the computer and stored on the drum. It is then possible to sweep in any direction through the transforms either in frequency or in time.

Its options are similar to those of DSD and include: namelist, frequency sweep, timesweep, amplitude scaling, trigger, variable frequency resolution, and spotlight.

D. NIFTY

Written to facilitate the handling of the numerous magnetic tapes involved in the project, NIFTY consists of tightly coded assembly language subroutines covering all aspects of tape manipulation. A master program, written in FORTRAN, may be compiled with the subroutines for stand-alone or overlay use or the subroutines can be used in conjunction with arbitrary programs.

Options available to the user of NIFTY include: reading and writing tapes in either BCD or binary; skipping forward or backward a specified number of records or files; dumping a tape out onto another tape or onto the lineprinter; writing end-of-file marks on tapes; and rewinding tapes.

E. XFORM

Designed to take fast Fourier transforms of up to 1024 points in length with a user specified increment between transforms, this program can be used stand-alone or, with slight modification, as a subroutine. By taking full advantage of the drum peripheral to the SDS 9300, this program was designed to minimize execution time when used as a part of an interactive graphics display package.

The user can choose to have an average noise transform computed from the average of the first k transforms. These are used to compute the deviation from the mean of the original transforms.

$$X(f) = \begin{cases} x_i(f) - \bar{x}(f) & \\ 0 \quad \text{if } x_i(f) - \bar{x}(f) < 0 & \end{cases} \qquad i = 1,N$$

where

$$\bar{x}(f) = 1/k \sum_{i=1}^{k} x_i(f) \qquad k < N$$

This proceedure can, in many cases, result in signal enhancement.

F. ON-LINE-FSP

The Extended Signal Processing program was developed to provide the user with a versatile display of transformed signals in three dimensions through which the dynamic characteristics of the signals in both the frequency and time domains could be studied. Originally designed for use with a few long data sets, ESP underwent extensive modifica-tins to allow it to be more efficient when processing the numerous short seismic data sets. An option was included to allow the transforms to be preformed while the interactive graphics display was in progress. Other features added to the program were the ability to handle multiple file input tapes and a hard-copy option. The hard-copy option was par-ticularly useful when making comparisons of the qualitative aspects of various events. The following options are avail-able to the user: namelist, input halt, amplitude scaling, frequency sweep, spotlight, hard-copy, and harmonic display.

G. BANDS

This program was written to aid the search for a quanta-tive discriminant between earthquakes and explosions. Transforms were taken on-line and, within specified frequen-cy bands, a numeric was found which was chosen to be propor-tional to either the amplitude or the power of the Fourier coefficients within that window. The algorithm is essen-tially a simple integration:

$$\text{Band factor } i = \sum_{j=SBi}^{EBi} x_j \times \text{resolution} \,/\, \text{normalization factor for window widths}$$

where

SB_i is the starting frequency of band i

EB_i is the ending frequency of band i

x_i is either the amplitude or power of the Fourier coefficient,

and if no normalization is desired, the normalization factor is set equal to 1.

The results were stored on magnetic tape and could be processed through an output program, RSLTS, which allowed the user to choose several options for normalization and intercomparison of the data and obtain a hard-copy print out.

Program options included a choice of either amplitude or power results, normalization with respect to window width, noise subtraction, and output normalization with respect to any frequency band for the spectra collectively or individually.

H. EQPLOT

EQPLOT, the hard-copy plotting program, was written in C, the high level programming language available within the UNIX operating system, which has been implemented on the PDP-11/50. The hard-copy output was obtained on the Versatec printer/plotter. Working essentially as a black-box

program, EQPLOT took the results of the ESP hard-copy option and formatted them for plotting.

The hard-copy capability we have developed allows the user to make detailed comparisons between the spectral characteristics of earthquakes and explosions. The user is not forced to rely on the remembered appearances of interesting event after they have disappeared from the AGT-10 screen.

V. Observations

Most explosions can be distinguished from earthquakes using a combination of the following: location, complexity, depth, and the presence or absence of S and surface waves. There are, however, exceptional events. The discrimination of these was a motivation for this research.

To be meaningful, a discriminant must be valid for typical as well as extraordinary events. Consequently, a large sample of events from many sites and possessing a range in depth and magnitude was examined. To eliminate variations caused by using data obtained at several sites on many different kinds of detectors, only data from LASA were used.

Two sets of data were obtained: a copy of a tape, sent by Control Data Corporation, dubbed from data in the files at MIT and elsewhere and approximately 110 events through ACDA. The MIT data consisted of 327 events from 1966 through 1974. Of these, 215 included steered beam sums and data from four subarrays, either F1, F2, F3, and F4 or D1, D2, D3, or D4. The ACDA data were sent by Teledyne Geotech in Alexandria, Virginia and included 25 explosions and 84 earthquakes. These data included all of the operative subarrays at LASA but not the main beam.

Preliminary analysis was based upon the application of graphical display techniques originally developed at the Naval Postgraduate School for acoustic signal processing.

Software was optimized for use with seismic data.

A selection of events was processed using On-Line-ESP. With its dynamic capabilities and hard-copy option, it was possible to tell that the frequency distributions of explosions were quite different from those of earthquakes. Figures 1 - 7 illustrate this point.

It was found that certain test sites possessed distinctive signatures on the spectra obtained from transforming the LASA data. In particular, events originating from Semipalatinsk were quite unique and it took only a little practice before most events from that location could be identified solely on the basis of their spectra.

Software was developed to aid in the search for a quantitative discriminant based on the spectral differences between the events. It was found that, for some events, signals were detected at the highest attainable frequencies. Since the sampling rate determines the highest reliable frequency on a transform, subsequent discussions will be based solely upon subarray data from the MIT tape having a sampling rate of 20 samples per second. Only events prior to 15 April 1969 were truly sampled at 20 samples per second. The reader is referred to the discussion of the data for more information regarding the sampling rates. The sampling rates of the data were programmatically verified.

By processing the data with the subroutine BANDS, the sums of the amplitudes of the Fourier coefficients within

several spectral windows were found. The spectral windows chosen were:

r_1	0.4 - 0.6 Hz,
r_2	0.6 - 1.0 Hz,
r_3	1.0 - 1.4 Hz,
r_4	1.4 - 2.0 Hz,
r_5	2.0 - 3.0 Hz,
r_6	3.0 - 4.5 Hz,
r_7	4.5 - 6.0 Hz, and
r_8	6.0 - 9.0 Hz.

To accentuate the response in the larger high frequency windows, the sums were not normalized with respect to window width. However, to aid comparison of events, the results for each window were normalized with respect to the results for the 0.6 to 1.0 Hz window.

A good correlation was found between the amplitude in the 0.6 to 1.0 Hz window and the magnitude, m , of the event. (Figure 9) The data on explosions and shallow focus earthquakes were separated into groups according to their unnormalized amplitudes in the 0.6 to 1.0 Hz window. The groups were as follows:

A	$0.1 - 0.5 \times 10^5$,
B	$0.5 - 0.999 \times 10^4$,
C	$0.1 - 0.499 \times 10^4$,
D	$0.5 - 0.999 \times 10^3$, and
E	$0.1 - 0.499 \times 10^3$.

Means were calculated for each r within each of the five groups. Despite the fact that the normalized response in the windows covering 1.0 to 4.5 Hz was a function of the magnitude of the event, a simple discriminant was attainable.

We found that, for all explosions, the response in the 1.0 - 1.4 Hz window was greater than that in the 0.6 - 1.0 Hz window. The reverse was true for earthquakes which also had higher means at 0.4 - 0.6 Hz than did explosions. A discriminant can be constructed from the simple combination of these responses and is written as:

$$D_j = \sum_{i=1}^{8} n_i \, r_{ij} \quad ,$$

where r_{ij} is one of eight spectral windows for event j and n_i is a normalization factor depending upon the amplitude at 0.6 - 1.0 Hz or the magnitude, m_b, of the event.

VI. Discussion

The discriminant gave strongly negative values for essentially all deep and shallow focus earthquakes and zero to strongly positive values for all explosions. Signals arriving at LASA from Nevada Test Site, NTS, explosions yeilded anomalously negative values; however, because of the proximity of NTS to LASA, they are not teleseismic. It may be necessary to consider local crustal conditions when using spectral criteria based on such nearby events.

Inspection of the data and plots of amplitude versus frequency revealed that earthquakes with magnitudes below 5.5 have a common high frequency asymptote, while larger earthquakes have a higher, but parallel, high frequency asymptote. A factor largely responsible for this result may be the increased source persistence of larger earthquakes. No high frequency asymptote was found for explosions. This does not preclude the possibility that such an asymptote exits; nevertheless, within the frequency range studied in this project, none was found.

Graphical analysis of the earthquakes and explosions using tentative estimates of the attenuation resulted in estimates of the source spectra. It is possible to explain the low D values obtained at several sites as being the result of differences in attenuation at the site. For example, lower D values will result when the explosion takes

place in softer rocks. The lower than normal D values for Novaya Zemlya can be explained by the fact that these few very large explosions were dragged down while being averaged with other members of Group A. By separately reanalyzing these events, it is possible to bring their D values up to more positive levels. Also it should be noted that for such large events, the roll-over in the source spectra occurs at frequencies less than 5 Hz. This will contribute to somewhat lower D values. The low D values for the NTS explosions can be explained as being due to frequency sensitive attenuation.

Given data between 6 and 9 Hz, it is possible to evaluate attenuation effects for an arbitrary event and, if its attenuation has a higher frequency dependance than normally found for earthquakes, a modified discriminant can be calculated by first adjusting the data to give a high frequency dependancy similar to that of an earthquake and then proceeding as usual.

It may also be possible to compute yields for explosions from uncalibrated sites. Once an event has been determined to be an explosion, it is possible to force the data to fit the observed spectra for Site A at Semipalatinsk. The resultant amplitude near 1 Hz is proportional to magnitude from which yield can be found using a known relationship between yield and magnitude.

For a more detailed discussion of our data analysis, the

reader is referred to Appendix B which contains a presentation by Evernden (1977) of preliminary findings taken from this study.

VII. Data

As mentioned above, it is necessary to discuss the data. One would expect that the number of observations that have been collected in this program of both earthquakes and explosions would provide seismologists with a useful data-base for further research. However, questions as to the integrity of these data have been uncovered. It is felt that any research based on them is rendered suspect, including that reported in this paper and consequently the paper of Evernden (1977), which describes this study. Below are discussed some of the revelations that gradually surfaced.

A. Sampling Rate

In October 1975, a copy of a tape that had been dubbed from events selected from the data library at MIT's Lincoln Laboratories and elsewhere was received through Control Data Corporation and Col. Russell Ives. Enclosed with the tape was a complete description of its format. The data for each event included three records of header information. Although great care had been given to the location and the timing of the event, no information was given regarding the sampling rate of the data. Verbal inquiry resulted in a report that all of the data were sampled at 20 samples per second.

As the data were being processed, a difference between the older and more recent data was noticed. Concurrent with the processing of the CDC data J. Evernden obtained from a

colleague at MIT a tape with a few events on it most of which duplicated those on the CDC tape. When processing identical events on the MIT and CDC tapes we found large differences in the results. In particular, there appeared to be large differences in the frequency distributions of the spectra. At that point, difficulties with the sampling rates were suspected. A few calls to Boston and Alexandria yeilded the following tale.

At its inception LASA seismometers were sampled at 20 samples per second and the digitized data were sent to Washington where they were stored. Copies of the data were sent to scientists working in the area of seismic surveilance. The published work of many of these scientists lead to the general belief that there was no information bove 5 Hz for either earthquakes or explosions (Philco-Ford report ref unknown). Faced with the storage of massive quantities of apparently over sampled data, the decision was made to halve the sampling rate. On 15 April 1969 LASA data were decimated.

By 1969, however, a large quantity of software had been written. MIT wished to obtain data compatible with the existing software, so, at their request, Teledyne sent to MIT data which were pseudo-sampled at 20 Hz. To obtain pseudo-sampled data, two adjacent points were averaged and the resulting interpolated point was inserted between them.

The reaction to this information was complete disbelief.

Quite a bit of both manpower and computer time had been spent trying to analyze data sampled at a different rate than had been reported. A discussion with R.W. Hamming confirmed what was intuitively obvious, that high frequencies in the pseudo-sampled data would be depressed relative to high frequencies in data that were actually sampled at 20 Hz.

To be off by a factor of two when analyzing the spectra has deliterious consequences. The Nyquist frequency has been halved, thus a spectrum which appears to cover N Herz actually covers only N/2 Hertz. The band integration analysis would veild meaningless results unless the true sampling rate of the data was known and used.

B. Filtering

At the request of ACDA, an attempt to detect a few very small events had been planned. A tape, L 16283, was received from ACDA. It contained two events: one in December 1974 and the other in April 1975. It was reported that all of the data had been sampled at 20 Hz.

Preliminary analysis of the data using the ESP interactive graphics display program showed that most of the detectors had anomalous spikes at a frequency of about 5 Hz and that the amplitudes did not fall of with increasing frequency in a manner characteristic of a detector response curve. It appeared to be filtered. Again, R.W. Hamming applied his practiced eye to the data and agreed that they were rather

peculiar.

Discussion with ACDA ultimately revealed that the data had been filtered at 5 Hz. The type of filter remains unknown.

Shortly thereafter, it was discovered that, given the start time of the data and the start time of the signal for the event, the analysis lead to one of two conclusions: first, that the time window of the data did not inculde the event or, second, that the data were actually sampled at 10 Hz.

The situation could have been saved by resampling the original analog data without the use of filters and at an appropriate sampling rate. Unfortunately, the analog tapes had been recycled and the original data were lost.

C. Data Acquisition

The length of time, over a year in the case of the data on tape L 16283, to obtain much of the data was quite long. With the delay between the request for and the acquisition of data shortened, it may be possible to have less information pertaining to data specifications lost or forgotten. Of course, requests for data should be reasonalble in size.

One product of this study is a set of ascii tapes of the data received to investigate seismic detection and discrimination. The tapes include the CDC data, the ACDA supplied earthquakes, and the ACDA supplied explosions. Data

recorded prior to 15 April 1969 were sampled at 20 Hz. Data following 15 April 1969 were sampled at 10 Hz. Any preprocessing to which the data were subjected prior to reciept at the Naval Postgraduate School wa neither reported nor uncovered; therefore, the user must beware and work with this data at his own risk.

VIII. Conclusions

We have described the software tools built to analyze the large quantity of seismic data involved in this project. Using this software on short period seismic data, we have been able to obtain a numeric which may provide a discriminant between earthquakes and explosions. This discriminant appears to be effective against multishot events and, given adequate information about the path, it may be possible to discriminate events only a few degrees from the detector.

The adequacy of the data we received has been discussed. We feel that every step of the data acquisition and analysis process should be sufficiently documented so that subsequent users will know the exact status of the data they receive. We have been in the unfortunate position of recieving data that were vaguely specified.

Figure Captions

Figures 1-7. These are plots made with the hard copy option of ESP of an explosion, a deep focus earthquake and a shallow focus earthquake. Notice that high frequencies are more pronounced for the subarrays than for the beam in all cases and that the explosion shows more high frequency information.

Fig 1. CDC data set event #5, Beam. Explosion at Novva Zemlya on October 27, 1966 having a magnitude of 6.3.

Fig 2. CDC data set event #5, subarray F2. Explosion at Novva Zemlya on October 27, 1966 having a magnitude of 6.3.

Fig 3. CDC data set event #5, subarray F3. Explosion at Novva Zemlya on October 27, 1966 having a magnitude of 6.3.

Fig 4. CDC data set event #202, Beam. Deep focus earthquake in the Hindu Kush region on January 20, 1972 having a magnitude of 6.0.

Fig 5. CDC data set event #202, subarray F1. Deep focus earthquake in the Hindu Kush region on January 20, 1972 having a magnitude of 6.0.

Fig 6. CDC data set event #210, Beam. Shallow focus earthquake in the Andreanof Islands of the Aleutian arc on March 20, 1973 having a magnitude of 6.0.

Fig 7. CDC data set event #210, subarray F1. Shallow focus earthquake in the Andreanof Islands of the Aleutian arc on March 20, 1973 having a magnitude of 6.0.

Fig 8. Amplitude within the spectral window 0.6 to 1.0 Hz versus magnitude of the event for explosions and earthquakes.

25 73.4N 54.6E
DC MIGS

FIGURE 1

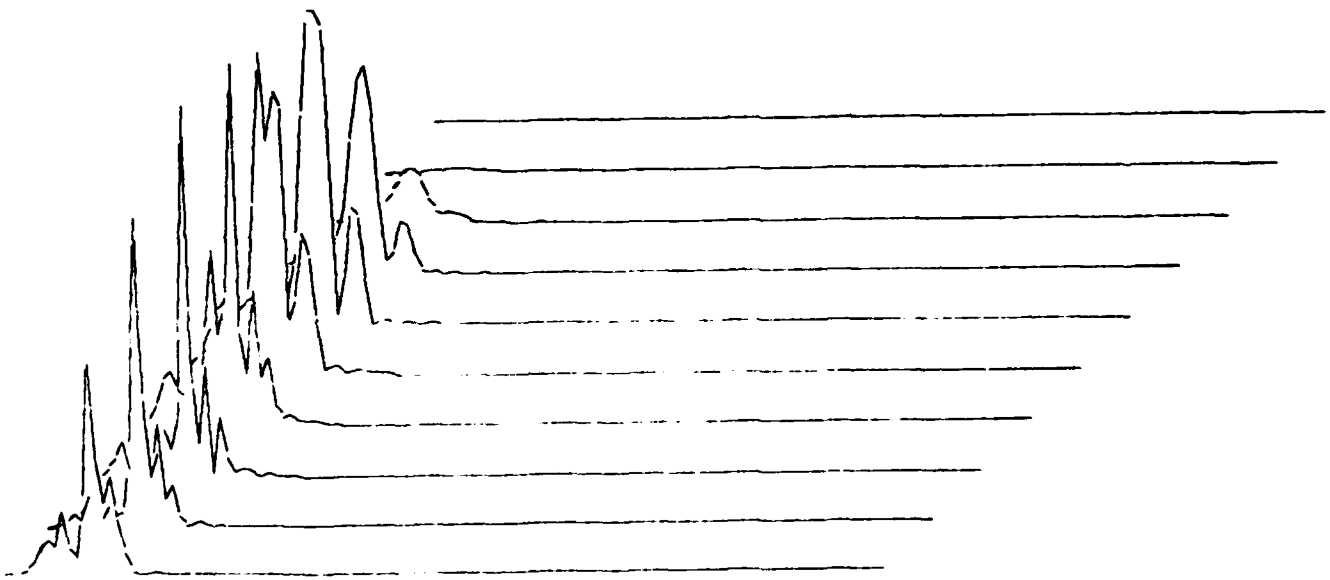


FIGURE 2

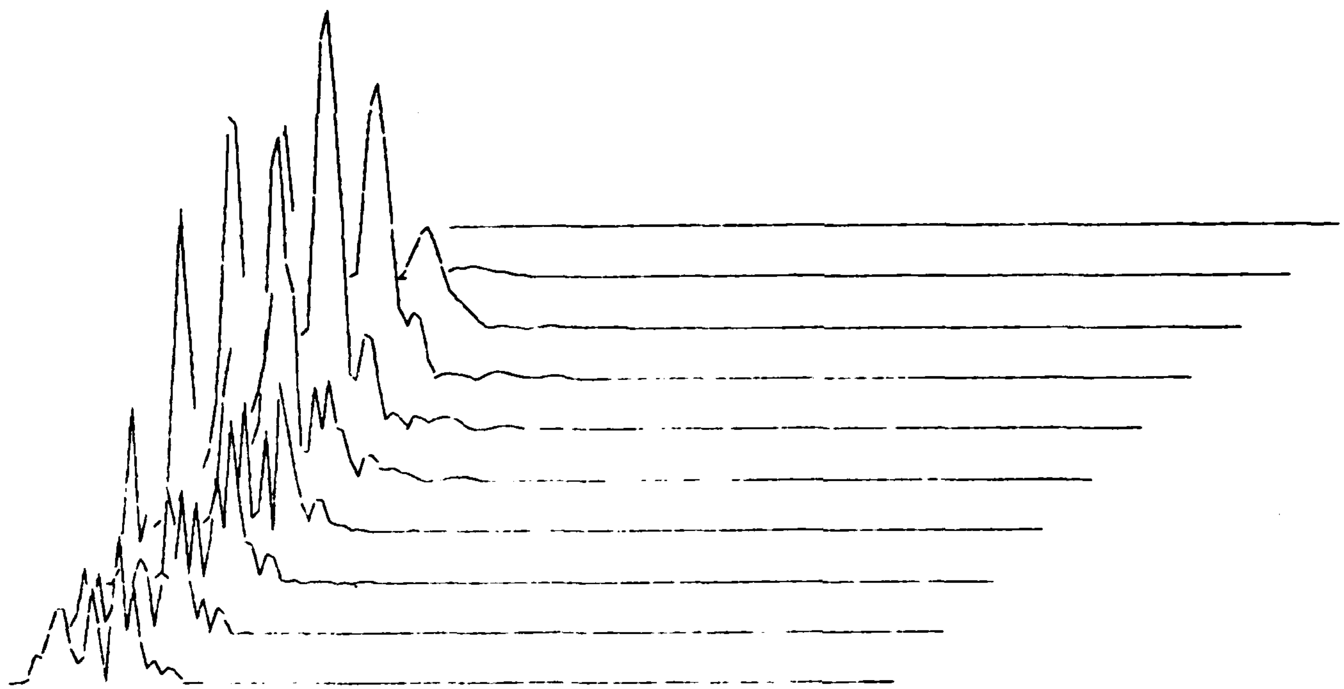
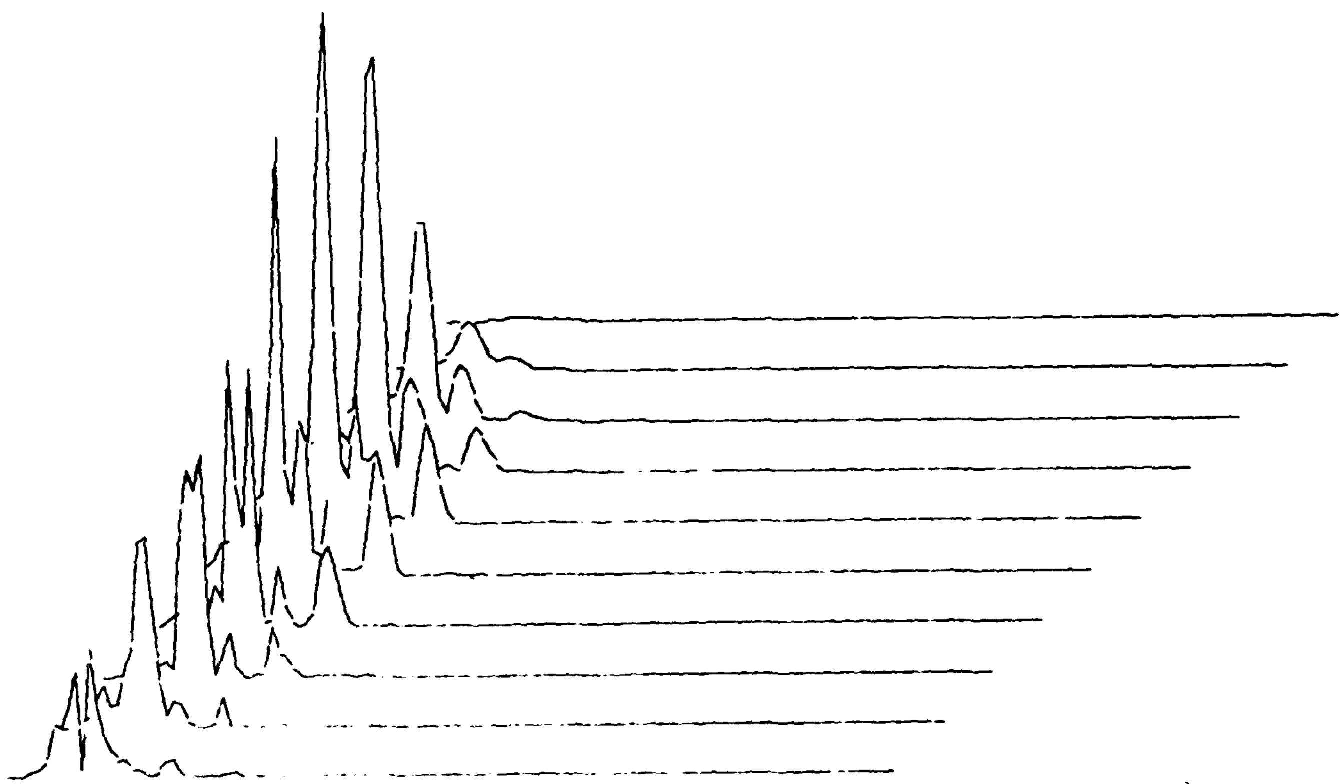


FIGURE 3



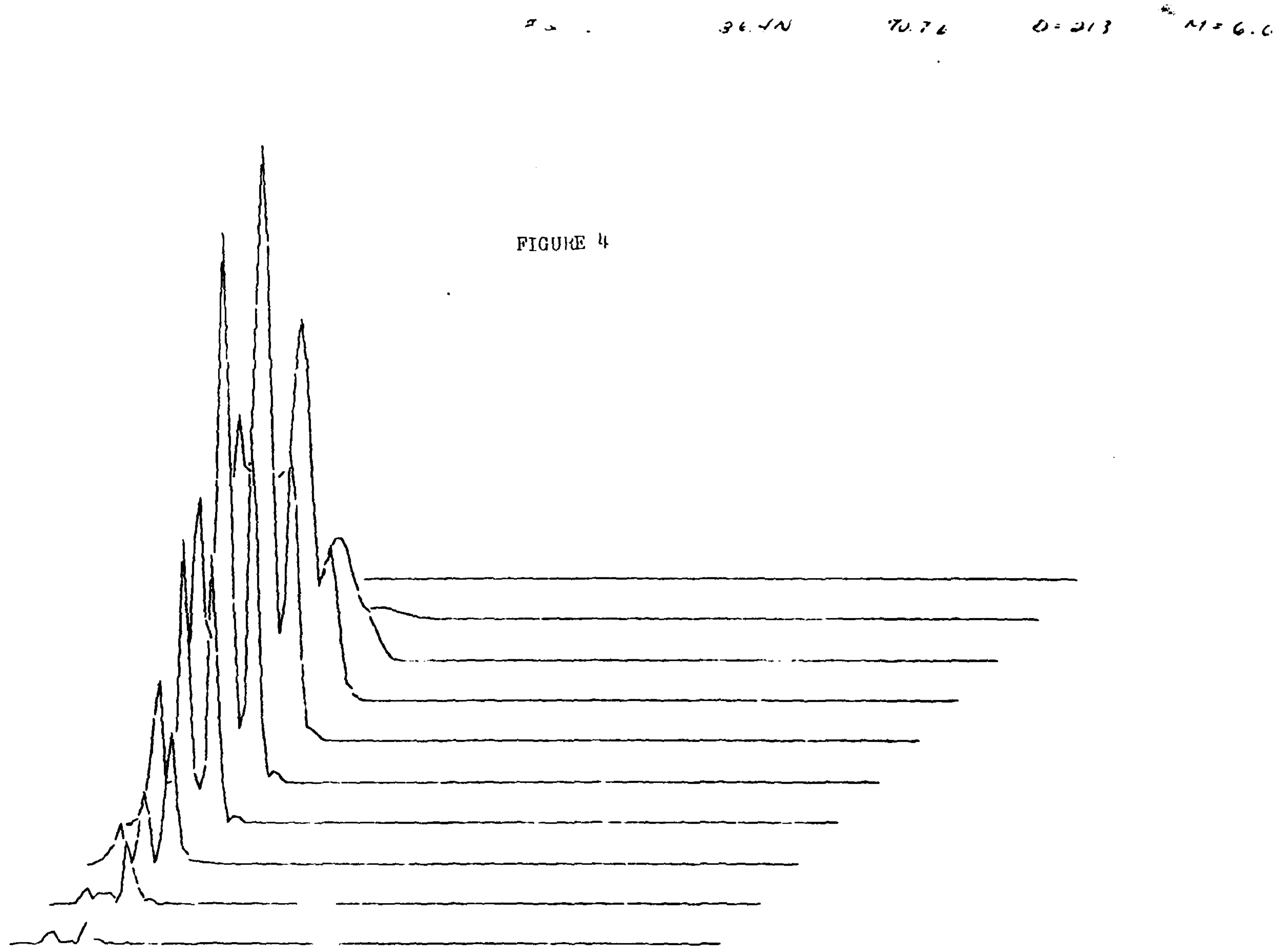
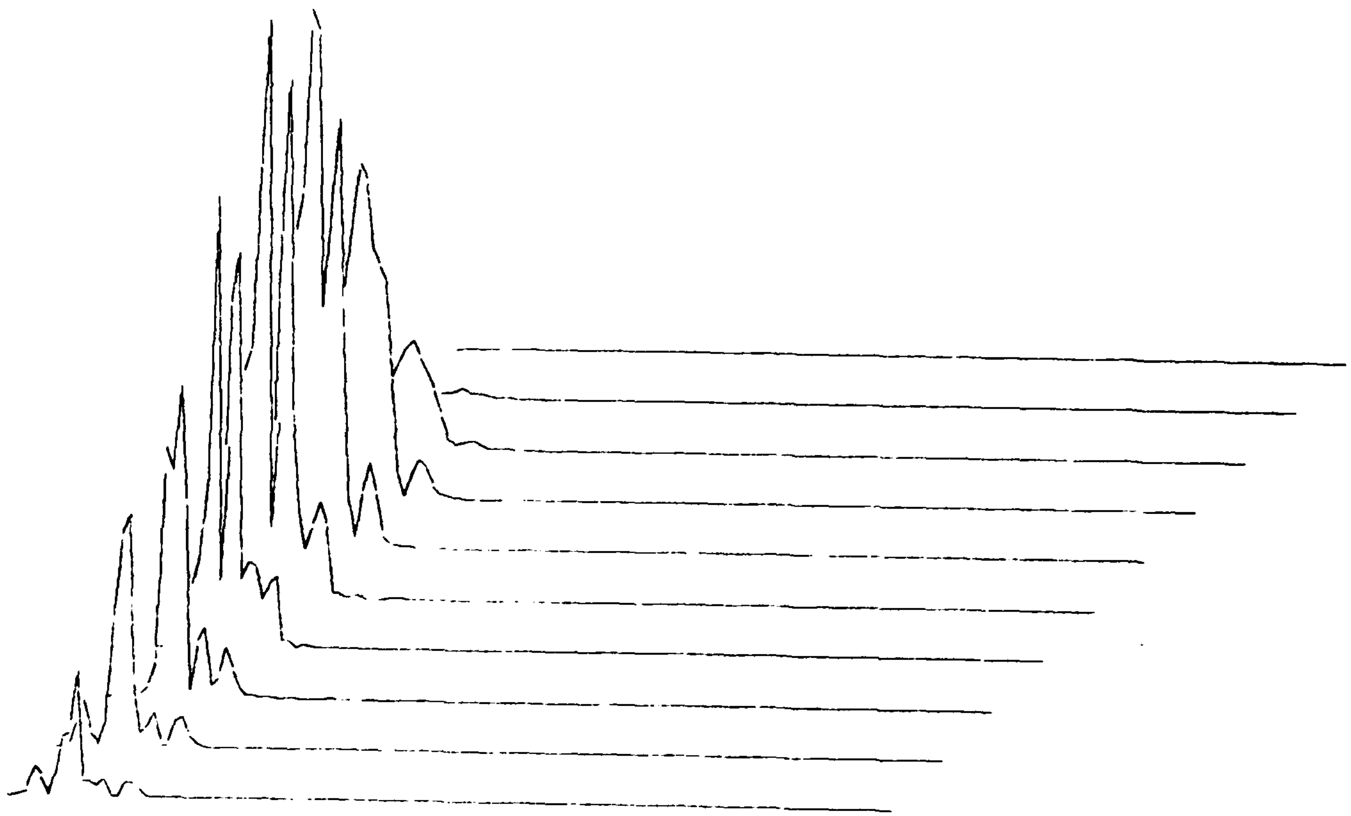


FIGURE 4

FIGURE 5



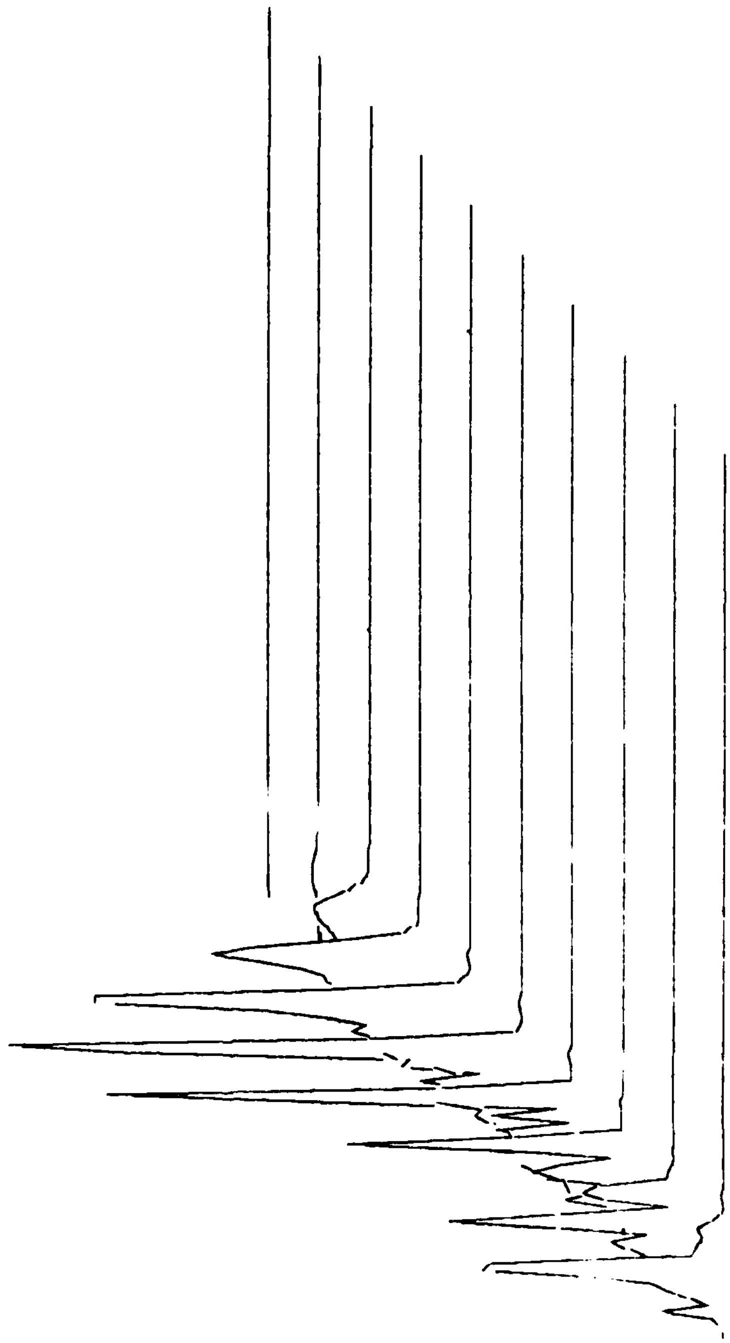
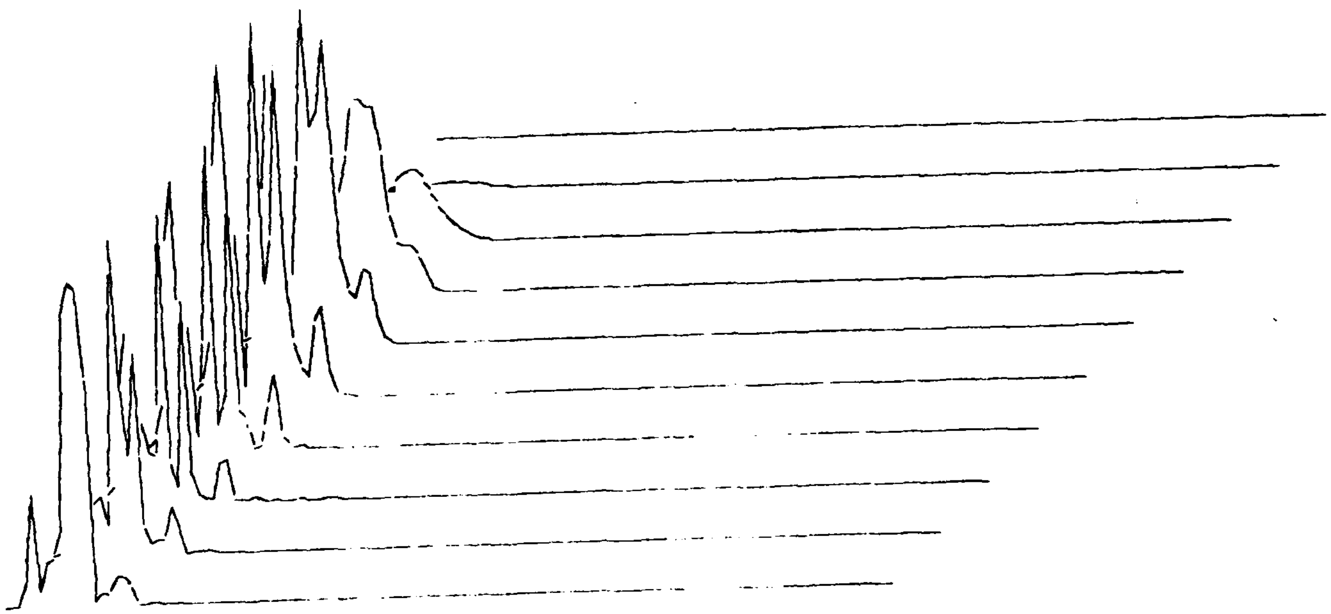
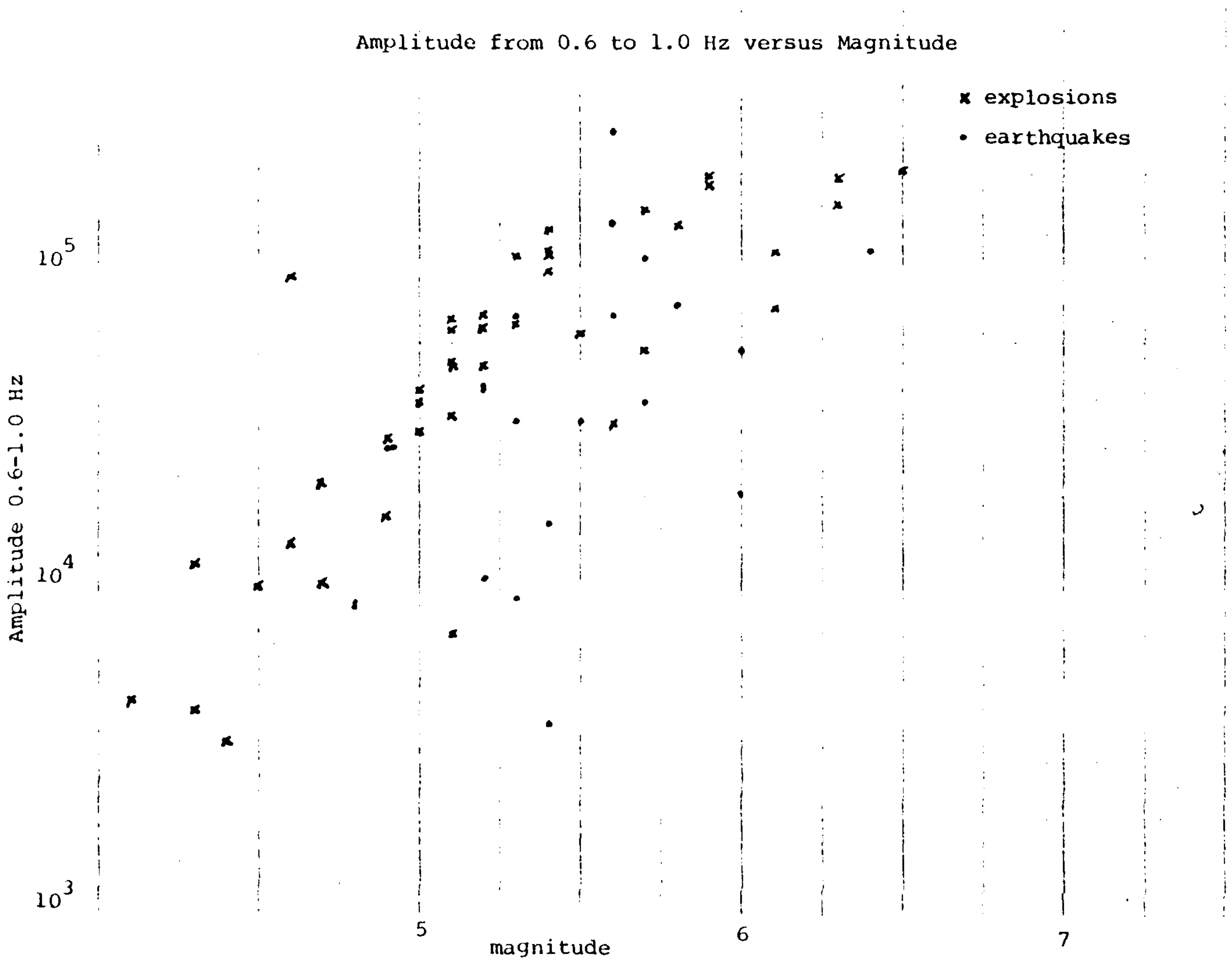


FIGURE 6

FIGURE 7





Amplitude from 0.6 to 1.0 Hz versus Magnitude
explosions
earthquakes
Amplitude 0.6-1.0 Hz
10^5
10^4
10^3
5
6
7
magnitude

FIGURE 8

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Appendix A

Software

Digitally Simulated Oscilliscope

Designed to display the unprocessed seismic waveforms, the Digitally Simulated Oscilliscope or DSO program takes full advantage of the interactive features of the XDX 9300/AGT graphics system. With the capibility of handling up to ten seismograms simultaneously, its options are selected by using the function switches on the AGT-10 and include:

i. Namelist

The user is allowed to modify the value of any parameter specified as a namelist variable in the FORTRAN code. When this option is selected, a cursor appears on the AGT-10 screen. Using the AGT teletype, the operator types the name and value of the variable to be changed. Each character typed will appear on the screen. The line-edit facility provided by the AGT-10 system allows the user to modify the current line. When it is satisfactory, a carriage return signifies its completion. Several namelist parameters may be modified. When the operator is finised, a * carriage return will turn off the namelist option and normal program execution will resume.

ii. Timesweep

Because the maximum number of points that can be plotted in the x direction is limited to 200, it is

impossible to view most seismograms in their entirety and at a resolution of one sample point per plot point. The time sweep option allows the operator to inspect any time segment of a seismogram. There are several ways of exercising this option.

a. Coarse Timesweep

This allows the operator to use the control dials to sweep both forward and backward through selected seismograms rapidly.

b. Fine Timesweep

Similar to coarse timesweep, this option serves as a vernier. Again the control dials are used to position the time trace.

c. Autosweep

All seismograms will be swept in time simultaneously with this option. The timesweep is continuous until the option is turned off and it is possible to move either forward ro backward through time. Pointers assure that the display will not run off either end of the seismogram.

d. Single Sweep

Instead of sweeping continuously, this option is automatically turned off after completing one timesweep of the data. Again the user chooses to

sweep either forward or backward across the data.

iii. Amplitude Scaling

As an alternative to changing the data's scale factor through namelist, it is possible to use a control dial to modify the scaling of the data. This option will remain in effect until it is turned off by the user.

iv. Trigger

By using a combination of function switches and control dials, it is possible to set a positive or negative amplitude trigger level and to trigger either from the beginning of the data or from the current lead point of the data being displayed on the AGT-10. This allows the user to find large fluctuations in the data without inspecting the entire seismogram.

v. Timebase

It is possible to alter the displayed resolution of the data by varying the timebase with a control dial. An increase of resolution to ten points per seismogram is possible and, by an averaging process, the resolution can be decreased so that the entire seismogram just fills the screen.

vi. Spotlight

A moveable highlight is available so that the user

can acctentuate interesting features of the display. Spotlighting is also useful when searching for interesting features since the operator is subconciously forced to pay more attention to the highlighted region.

I. DSO - Operating Summary

DSO may be used on a stand-alone basis or as a segment in a larger overlay job. To begin using DSO, the operator must transfer program control to DSO. This may be done by rerunning a core image of DSO from a save tape when using stand-alone DSO or, in the case of an overlay job, by setting appropriate flags in the control program. It is necessary to prepare the AGT-10 for DSO execution by calling the "GATED" graphics package.

The data tape, which has been prepared with the standard header records, is mounted on the appropriate drive (Unit 2).

Because there are many namelist variables which must be specified when running this program, it is convienent to prepare a card deck containing namelist input information. When the program requests input, instead of laboriously typing in all namelist parameters, the user types the following on the XDS 9300 teletype console:

ICARD = 1

c/r *

c/r

II. Function Switch Definitions

Once the program has been initialized, the AGT-10 console, function switches, and control dials are used for program control. Below are listed the function switch definitions. When control dials are to be used in conjunction with a particular function switch option, they have been indicated in parentheses.

3 - namelist input

This allows the operator to modify namelist parameters from the AGT-10 teletype console.

4 - dial overlay option

Since there are only six control dials and since a maximum of ten seismograms can be displayed simultaneously, this function switch allows the operator to use one control dial for more than one seismogram when the sweep option has been selected.

5 - coarse sweep (all dials)

Each seismogram can be swept individually in time and is governed by the control dials.

6 - fine sweep (all dials)

This serves as a vernier to the coarse sweep option. For both the coarse and fine sweep options, function

switch 10 is used to reverse direction.

7 - scaling (dial D)

As an alternative to namelist, amplitudes may be scaled manually.

8 - trigger (dial C)

The control dial is used to set the trigger level, for which there is a numeric display on the screen, and function switch 10 is used to change the sign of the trigger level.

9 - auto sweep

This option causes continuous time sweeping of all seismograms. Function switch 10 will reverse the direction of the sweep.

10 - sign option

Used in conjunction with function switches 5, 6, 8, 9, and 11, the sign of the timesweep direction or of the trigger amplitude becomes negative.

11 - auto sweep once

A single time sweep of all of the data is executed. The sweep direction is reversed by selecting function switch 10.

12 - span (dial C)

This option expands or contracts the timebase of the display.

13 - spotlight (dial A)

The control dial is used to position the spotlight at the desired location. When the function switch is turned off, the highlight will remain on and stationary.

14 - remove spotlight

This option turns off the spotlight.

16 - tape input

This function switch allows tape input of inverse FFT's. It was not extensively used in this project.

When several function switches are on simultaneously, a function switch precedence will cause certain options to be overridden. Switches 7, 6, and 5 are listed in decending order of precedence.

III. Control Parameters

The namelist variables are listed below. For each, the range and default value have been given in parentheses. 'I' has been used to indicate array variables all of which can have up to ten entries. Real variables are indicated by the use of decimal points.

A. Original Data Specifications:

NCH(1-2;2)	number of channels
MP(?;0;I)	maximum number of points on the seismogram

SR(?;20.0)   original sampling rate of data in samples/second

ITO(?,?,?;0,0,0;I)   start time of the data in hours, minutes, and seconds

IDGRAM(?;0;I)   seismogram identification number

B. Mechanical Data Specifications:

ICH(?;1)   channel to be displayed

LREC(1-1024;1024)   length of input record in words

DZONE(0-?;.009)   sensitivity of dials; as DZONE is decreased, the dials become more sensitive

C. Basic Display Specifications

NPT(1-200;200)   number of points to be displayed per line

BIAS(?;0;I)   bias for displayed data

SCL(?;10.0)   scale factor, this scale factor should be used for interactive modification

SF(?;65536)   scale factor for AGT-10 output

INT(1-10;1)   intensity of data display

MAXGM(1-10;10)	maximum number of seismograms that can be displayed
IW(0-1,1,I)	flags choosing which seismograms will be displayed 0-no display ; 1-display

D. Program Control Specifications

ITAPE(0-7;2)	input tape unit number
MTAPE(0-7;0)	rewind specified tape unit
IDEV(1-2;1)	AGT-10 number
ICARD(0-1;0)	read card input
INITL(0-1;0)	reinitialize program
KILL(0-1;0)	return to master program

E. Display Specifications

LP(1-MP;1;I)	lead point of displayed data
X0(?;-0.4)	location of X=0, coordinate and data display
Y0(?;-0.7)	location of Y=0, coordinate and data display
INCR(0-?;100)	lead point increment when using auto sweep
INC(0-?;0)	number of points skipped between each point displayed

F. Spot Display Specifications

IWIDE(1-10;10)   width of spotlight in points

G. Trigger Control Specifications

MAXV(0-?;4096)   maximum value of trigger level

IV. Example of a Change of Control Parameters

Initially the user has the following display:

1. 8 seismograms, numbered 1 through 8
2. INT = 1, the lowest possible intensity on the display
3. INC = 0, one data point per plot point on the screen

The parameters are to be changed to yeild the following:

1. 2 seismograms, numbers 5 and 7

   Type

   1. IW = 0,0,0,0,1,0,1,0,0,0

   or

   IW(1) = 0

   .

   .

   .

   IW(4) = 0

   IW(5) = 1

   IW(6) = 0

IW(7) = 1

IW(8) = 0

IW(9) = 0

IW(10) = 0

2. INT = 2, increase screen intensity

3. INC = 2, two data points are averaged to produce one plot point. (Function switch 12 could also have been used.)

```
*
*
*   PROJECT EARTHQUAKE
*
*   SUBTASK DSO - DIGITALLY SIMULATED OSCILLISCOPE
*
*
*
      JSW(I) = LAND(JW,LLS(1,23-I))
      JOFF(I)=LAND(JW,LXOR(-1,LLS(1,23-I)))
*
      INTEGER VBUF(400),XVER,YVER,DMVER
      INTEGER EVID
      DIMENSION Y(200,10),MD(200,10),IBUF(1024),IMAGE(2002),IMG(200,10),
     *          LP(10),IP(10),MP(10),IREC(10),NREC(10),LPD(10),
     *          DIALS(10),CDS(10),VDS(10),ITIME(3,10),ITO(3,10),IT(10),
     *          ITX(2),ITDIR(30),IGDIR(10),IMSPT(102),IMS(10,10),
     $          BIAS(10), ICOR(24),IDGM(10),IDGRAM(10),ITXA(6), IW(10)
*
      EQUIVALENCE (IMAGE(2),IMG), (IMSPT(2),IMS)
      EQUIVALENCE (XO,XC),(YO,YC)
      EQUIVALENCE (MD,IBUF)
*
      NAMELIST      NCH,ICH,LREC,SR,NPT,IWIDE,BIAS,ITAPE,MTAPE,
     1          IDEV,LP,MP,XO,YO,ITO,SCL,ICARD,INCR,DZONE,SF,INITL
     I          ,INC,MAXV,INT,MAXGM,IDGRAM,IW,NSKIP, IDELT
      NAMELIST KILL
      NAMELIST NFILE
      NAMELIST EVID
*
      DATA NULL/-1/,LREC/1024/,MAXV/4096/,DZONE/.0080/,IDEV/1/,
     *     ITAPE/2/,IWIDE/10/,XO/-0.4/,YO/-.7/,SR/20./,SCL/10./,NPT/200/,
     *     ,INC/0/,INT/1/,INTSP/10/,DX/0.007/,INCR/100/,SF/65536/
     *     ,ICURS/0/,NSKIP/0/,IDELT/128/
      DATA KILL/0/
      DATA NFILE/0/
      DATA EVID/0/
*
      INTEGER TRL
C
C     PARAMETER  INPUT
C
   10 INITL = 1
      ITADD = 0
      OUTPUT(102) 'PARAMETER  INPUT'
      INPUT(101)
   20 IF(ICARD .EQ. 1) ICARD = 0 ; INPUT(5)
      IF(INITL .EQ. 0) GO TO 100
   30 CALL INIT
      IF(NFILE .LE. 0) GO TO 32
```

```
      CALL FØRSCN(ITAPE,NFILE)
      NFILE = 0
32    CØNTINUE
C
C     READ INPUT TAPE
C
   31 INITL = 0
      DØ 90 I = 1,NGM
      MREC = 0
      DØ 35 N = 2,I
   35 MREC = MREC + NREC(N-1)
      IFILE = 10 + MREC
      DØ 90 J = 1,NCH
      IF(J .NE. ICH) GØ TØ 60
*
*     READ IN RECØRDS ØF CHANNEL TØ BE DISPLAYED AND STØRE ØN DRUM
*
      DØ 50 K = 1,NREC(I)
      CALL BININ(ITAPE,IBUF,LREC,IND)
      IF(IND .EQ. 1) STØP
      CALL WRITE(IFILE, IBUF,LREC)
   50 IFILE = IFILE + 1
      GØ TØ 90
*
*     READ THRØUGH RECØRDS ØF THE CHANNELS TØ BE SKIPPED
*
   60 DØ 80 K = 1,NREC(I)
      CALL BININ(ITAPE,IBUF,1,IND)
      IF(IND .EQ. 1) GØ TØ 10
   80 CØNTINUE
   90 CØNTINUE
C
C     SETUP DISPLAY BUFFER
C
      IFLD = 1
*
*     CØMPUTE THE RECØRD IN WHICH THE CURRENT LEAD PØINT IS LØCATED
*     THE LEAD PØINT IS THE IP-TH PØINT ØF THE RECØRD
*
  100 DØ 110 I = 1,NGM
      IREC(I) = LP(I) / LREC
      IP(I) = LP(I) - IREC(I)*LREC
  110 IF(IP(I) .EQ. 0) IP(I) = LREC
C
      I = 0
      DØ 160 IJK = 1,MAXGM
      IF(IW(IJK) .EQ. 0) GØ TØ 160
      I = I + 1
      IF(ISCL .NE. 0) GØ TØ 101
      IF(LP(I) .EQ. LPD(I)) GØ TØ 160
```

```
  101 MREC = 0
      DO 115 N = 2,IJK
  115 MREC = MREC + NREC(N - 1)
      IFILE = 10 + IREC(I) + MREC
      CALL READD(IFILE, IBUF, LREC)
      LPD(I) = LP(I)
      DO 130 J = 1,NPT
*
*     IF THE CURRENT POINT EXCEEDS THE BOUNDS OF THE GRAM, STUFF ZEROS
*     IN THE REMAINDER OF THE DISPLAY BUFFER
*
      IF(LP(I) + (J-1)*(INC+1) .GT. MP(I)) GO TO 155
      IR = IP(I) + (J-1)*(INC+1)
*
*     MUST GO TO THE NEXT RECORD
*
      IF(IR.GT.LREC)IP(I)=IR-LREC;GO TO 140
      Y(J,I) = IBUF(IR)*SCL/SF
  130 CONTINUE
      GO TO 160
  140 IFILE = IFILE + 1
*
*     TEST TO SEE IF ALL DATA HAS BEEN EXHAUSTED, IF SO, STUFF ZEROS INTO
*     THE REMAINDER OF ITS OUTPUT ARRAY
*
      IF(IFILE .GE. MREC + 10+ NREC(I)) GO TO 155
      CALL READD(IFILE, IBUF, LREC)
      DO 150 K = J,NPT
      IR=IP(I)+(K-J)*(INC+1)
*
*     MUST GO TO THE NEXT RECORD
*
      IF(IR.GT.LREC)J=K;IP(I)=IR-LREC;GO TO 140
  150 Y(K,I) = IBUF(IR)*SCL/SF
      GO TO 160
*
*     STUFF ZEROS INTO THE REMAINDER OF THE GRAPHICS ARRAY
*
  155 DO 156 JJ = J,NPT
  156 Y(JJ,I) = 0.0
  160 CONTINUE
      ISCL = 0
C
C     DISPLY BUFFER
C
      IF(IFLD .EQ. 0) GO TO 165
      CALL TIMETX
      CALL REMOVE
      CALL DSPLY
  165 IF(KSFLG .EQ. 0) GO TO 170
```

```
      IF(KSPT .NE. 0) CALL SPOT
      KSPT = 0
  170 CONTINUE
C
C     SENSE FUNCTION SWITCH OPTION
C
C     FUNCTION SWITCH ASSIGNMENT
C     3  NAMELIST INPUT
C     4  DIAL OVERLAY OPTION
C     5  TIME SWEEP - COARSE  - ALL DIALS
C     6  TIME SWEEP  -  VERNIER  -  ALL DIALS
C     7  AMPLITUDE SCALING  -  DIAL 4
C     8  TRIGER  -  DIAL 3
C     9  AUTO SWEEP
C     10  DIRECTION OF SWEEP
C     11  SINGLE SWEEP
C     12  TIME BASE  -  DIAL 3
C     13  SPOTLIGHT  -  DIAL 1
C     14 REMOVE SPOTLIGHT
C     15  TRIGGER FROM CURRENT LP
C     16   ADVANCE TAPE OR REVERSE TAPE IF FN SWITCH 10 IS ON
C
  200 CALL FNS(IDEV,ISW,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'ISW'
      JW = LXOR(JW,ISW)
      LB = NGM + 3
      DO 220 I = 3,16
      IF(JSW(I) .EQ. 0) GO TO 220
      ENCODE(4,210,ITX) I
  210 FORMAT(I2)
      CALL TEXTO(IDEV,ITX,1,LB,1,1,3,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'SW'
      LB = LB + 1
  220 CONTINUE
      DO 230 I = LB, NGM + 16
      CALL TEXTO(IDEV,NULL,1,I,1,1,3,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'NUL'
  230 CONTINUE
      CALL VCD(IDEV,DIALS, IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'VCD'
C
      IFLD = 1
*
*     TEST FOR NAMELIST INPUT
*
  300 IF(JSW(3) .EQ. 0) GO TO 310
      IB = NGM + 17
      CALL GINPUT(IDEV, ITDIR,IB)
      CALL PAR
      JW = JOFF(3)
```

```
      IF(MTAPE .NE. 0) CALL RWND(MTAPE); MTAPE = 0
      IF(ICARD .EQ.1) GO TO 20
      IF(INITL .EQ. 1) GO TO 30
*
*     IF THE NUMBER OF GRAMS TO BE DISPLAYED HAS BEEN CHANGED, REINITIALI
*
      IF(LSTNGM .NE. NGM) CALL INIT
      KSPT=1
      GO TO 100
*
*     EXERCISE VARIOUS FUNCTION SWITCH OPTIONS
*
  310 IF(JSW(5) .NE. 0) CALL COARSE; GO TO 100
      IF(JSW(6) .NE. 0) CALL VERNIER; GO TO 100
      IF(JSW(7) .NE. 0) CALL SCALE; GO TO 100
      IF(JSW(8) .NE. 0) CALL TRIGER; JW = JOFF(8); GO TO 100
      IF(JSW(9) .NE. 0) CALL AUTO; GO TO 100
      IF(JSW(11).NE. 0) CALL AUTO; JW=JOFF(11); GO TO 100
      IF(JSW(12).NE. 0) CALL SPAN; GO TO 100
      IF(JSW(13) .NE. 0) KSPT = 0; CALL SPOT; GO TO 100
      IF(JSW(14) .NE. 0)CALL SPOT;JW=JOFF(14); GO TO 100
      IF(JSW(15) .NE. 0) CALL VERSA; JW=JOFF(15)
      IF(JSW(16) .NE. 0) CALL TAPEIP;JW=JOFF(16); GO TO 31
      GO TO 200
*
*
*
      SUBROUTINE SCALE
      IF(ABS(DIALS(4) - SCLD) .LT. DZONE) IFLD = 0; RETURN
      SCLD=DIALS(4)
      SCL=(1.0+SCLD)*10.0
      DO 10 I=1,NGM
   10 LPD(I) = -1
      KSPT = 1
      RETURN
*
*
*
      SUBROUTINE TRIGER
      ISGN = 0
*
*     OPTION FOR NEGATIVE TRIGGER LEVEL
*
      IF(JSW(10) .NE. 0) ISGN = -1
*
*     MAXV IS THE UPPER LIMIT OF THE TRIGGER LEVEL
*
      TRL =(DIALS(3) +1)*MAXV/2
      TRL = ISIGN(TRL,ISGN)
      I = 0
```

```
      DO 30 IJK = 1,MAXGM
      IF(IW(IJK) .EQ. 0) GO TO 30
      I = I + 1
      MREC=0
      IRT = 1
      IST = 1
*
*     OPTION TO TRIGGER FROM CURRENT LEAD POINT
*
      IF(JSW(15) .NE. 0) IST=IREC(I) + 1; IRT=LP(I)-IREC(I)*LREC
      DO 10 J = 2,IJK
   10 MREC = MREC + NREC(J-1)
      DO 25 K = IST,NREC(I)
      IFILE=10+MREC  + (K-1)
      CALL READD(IFILE,IBUF,LREC)
      DO 20 L = IRT,LREC
      KK=LREC*(K-1)+L
      IF((IBUF(L) .LT. 0) .AND. (TRL .LT. 0)) GO TO 15
      IF(IBUF(L) .LT. 0) GO TO 20
      IF(TRL .LT. 0) GO TO 20
*
*     POSITIVE TRIGGER LEVEL
*
      IF((IBUF(L) - TRL) .GE. 0) LP(I) = KK; GO TO 30
      GO TO 20
*
*     NEGATIVE TRIGGER LEVEL
*
   15 IF((IBUF(L) - TRL) .LE. 0) LP(I) = KK; GO TO 30
20    CONTINUE
      IRT = 1
   25 CONTINUE
*
*     IF NO TRIGGER LEVEL IS FOUND, SET THE LEAD POINT EQUAL TO THE LAST
*     POINT OF THE GRAM
*
      LP(I) = MP(I)
   30 CONTINUE
      ENCODE(8,100,ITX)TRL
100   FORMAT(I8)
      CALL  TEXTO(IDEV,ITX,2,1,92,1,3,IER)
      IF(IER.NE.0)OUTPUT(102)IER,'TRL'
      KSPT = 1
  200 RETURN
*
*
*
      SUBROUTINE COARSE
      IF(JSW(6) .NE. 0) CALL VERNIER; RETURN
      IF(JSW(7) .NE. 0) CALL SCALE; RETURN
```

```
      IFLD = 0
      N1=NGM
      N2=0
      IF(NGM.GT.6)N1=6;N2=NGM-6
      IF(JSW(4).NE.0)GO TO 20
*
*     COMPUTATION FOR LINES 1 TO 6
*
      DO 10 I=1,N1
      IF(ABS(DIALS(I) - CDS(I)) .LT. DZONE) GO TO 10
      CDS(I)=DIALS(I)
*
*     THE RANGE OF THE LEAD POINT IS LIMITED BY THE TOTAL NUMBER OF
*     POINTS IN THE GRAM
*
      LP(I) = (1.0 + DIALS(I)) * MP(I)/2
*
*     INSURE DISPLAY AND SPOTLIGHT UPDATE
*
      IFLD = 1
      KSPT = 1
10    CONTINUE
      RETURN
*
*     COMPUTATION FOR LINES 7 TO 10
*
20    DO 30 I=1,N2
      IF(ABS(DIALS(I) - CDS(I+6)) .LT. DZONE) GO TO 30
      CDS(I+6)=DIALS(I)
      LP(I+6) = (1.0 + DIALS(I))*MP(I+6)/2
*
*     INSURE DISPLAY AND SPOTLIGHT UPDATE
*
      KSPT = 1
      IFLD = 1
30    CONTINUE
      RETURN
*
*
*
      SUBROUTINE VERNIER
      IFLD = 0
      N1=NGM
      N2=0
      ISGN = 1
*
*     OPTION TO GO BACKWARDS
*
      IF(JSW(10) .NE. 0) ISGN = -1
      IF(NGM.GT.6)N1=6;N2=NGM-6
```

```
      IF(JSW(4).NE.0)GO TO 20
*
*     COMPUTATION FOR LINES 1 TO 6
*
      DO 10 I=1,N1
      IF(ABS(DIALS(I) - VDS(I)) .LT. DZONE) GO TO 10
      VDS(I) = DIALS(I)
      LP(I) = LP(I) + (1.0 + DIALS(I))*NPT*ISGN/2
      IF(LP(I) .LT. 1) LP(I) = 1
*
*     INSURE DISPLAY AND SPOTLIGHT UPDATE
*
      KSPT = 1
      IFLD = 1
10    CONTINUE
      RETURN
*
*     COMPUTATION FOR LINES 7 TO 10
*
20    DO 30 I=1,N2
      IF(ABS(DIALS(I) - VDS(I+6)) .LT. DZONE) GO TO 30
      VDS(I+6)=DIALS(I)
      LP(I+6) = LP(I+6) + (1.0 + DIALS(I))*NPT*ISGN/2
      IF(LP(I+6) .LT. 1) LP(I+6) = 1
*
*     INSURE DISPLAY AND SPOTLIGHT UPDATE
*
      KSPT = 1
      IFLD = 1
30    CONTINUE
      RETURN
*
*
*
      SUBROUTINE AUTO
      ISGN=0
*
*     OPTION TO GO BACKWARDS
*
      IF(JSW(10).NE.0)ISGN=-1
      DO 10 I=1,NGM
*
*     INCREMENT EACH LEAD POINT BY +/- INCR, REMAINING WITHIN THE
*     LIMITS OF THE TOTAL NUMBER OF POINTS IN THE GRAM
*
      LP(I)=LP(I)+ISIGN(INCR,ISGN)
      IF(LP(I) .LT. 1) LP(I) = 1
      IF(LP(I) .GT. MP(I)) LP(I) = MP(I)
   10 CONTINUE
      KSPT = 1
```

```
      RETURN
*
*
*
      SUBROUTINE SPAN
      IF(ABS(DIALS(3) - SPN) .LT. DZONE) IFLD = 0;RETURN
      SPN = DIALS(3)
      IF(SPN .LE. 0) GO TO 20
*
*     EXPAND THE GRAM
*
   10 NPT = (1-SPN)*200
      IF(NPT .LT. 10) NPT = 10
      DX = 1.4/NPT
      INC = 0
      GO TO 30
*
*     CONTRACT THE GRAM
*
   20 INC = (ABS(SPN))*MPMX
      DX = 0.007
      NPT = 200
*
*     NUMBER OF SECONDS BEING DISPLAYED ON THE GRAPH
*
   30 S = (NPT/SR)*(INC+1)
   35 ENCODE(8,100,ITX) S
  100 FORMAT(F8.2)
      CALL TEXTO(IDEV,ITX,2,2,92,1,3,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'SPAN'
      DO 200 I = 1,NGM
*
*     CHANGE LPD TO INSURE THAT THE DISPLAY WILL BE UPDATED
*
  200 LPD(I) = 0
      KSPT = 1
      RETURN
*
*
*
      SUBROUTINE TIMETX
      DO 20 NM = 1,NGM
      I = NGM - (NM -1)
*
*     COMPUTE THE TIME OF THE FIRST POINT ON EACH SEISMOGRAM
*
      K = IT(I) + LPD(I)/SR
*
*     IF THE SPOTLIGHT IS ON, DISPLAY THE TIME AT ITS MIDPOINT
*
```

```
      IF(ICURS .NE. 0) K = K + (INC+1)*(SPTA +(IWIDE/2))/SR
      ITIME(1,I) = K /3600
      ITIME(2,I) = (K-ITIME(1,I)*3600)/60
      ITIME(3,I) = K - ITIME(1,I)*3600 - ITIME(2,I)*60
*
*     AMPLITUDE IS GIVEN FOR THE FIRST POINT ON EACH LINE
*
      IAMP = Y(1,I)*(SF/SCL)
      ENCODE(24,100,ITXA) IDGM(I),ITIME(1,I),ITIME(2,I), ITIME(3,I),IAMP
  100 FORMAT(A4,'    ',I2,' ',I2,' ',I2,'    ',I5,' ')
      CALL TEXT8(IDEV,ITXA,6,NM,1,1,3,IERROR)
      IF(IERROR .NE. 0) OUTPUT(102) IERROR,'TX8'
   20 CONTINUE
      RETURN
*
*
*
C     A SUBROUTINE TO DISPLAY GRAPHICAL DATA
C     CALLS  IHEAD, IPACK,GRAPH8
C
      SUBROUTINE DSPLY
      IMAGE(1) = IHEAD(0,INT)
      L = NPT*NGM + 2
      MKZ8 = LSTNPT - NPT
      DO 15 I = 1,NGM
      K = (I - 1)*NPT + 1
*
*     COMPUTE THE VERTICLE SPACING OF EACH LINE
*
      YV = Y0 + (I-1)*DY
      DO 10 J = 1,NPT
      XIM = X0 + DX*(J - 1)
      YIM = YV + Y(J,I) - BIAS(I)
      IF(J.NE. 1) GO TO 9
*
*     MAKE THE FIRST POINT ON EACH LINE A DRAW
*
      IMAGE(K+J) = IPACK(XIM,YIM,0)
      GO TO 10
    9 IMAGE(K+J) = IPACK(XIM,YIM,MD(J,I))
   10 CONTINUE
   15 CONTINUE
      IMAGE(L) = 0
*
*     PUT ZEROS IN THE UNUSED PORTION OF THE ARRAY
*
      DO 20 I = 1,MKZ8*NGM
   20 IMAGE(L+I) = 0
      CALL GRAPH8(IDEV, IMAGE,L, 1, IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'GP8'
```

```
      LSTNPT = NPT
      RETURN
C
C
C
      SUBROUTINE SPOT
      ICURS = 1
      IF(JSW(14) .NE. 0) ICURS = 0; GO TO 15
*
*     WHEN THE KSPT FLAG IS ON, THE SPOT WILL BE UPDATED;  HOWEVER,
*     THE AGT DIALS WILL NOT BE READ
*
      IF(KSPT .NE. 0) GO TO 9
*
*     READ THE AGT DIALS
*
      IF(ABS(DIALS(1) - SPT) .LT. DZONE) IFLD = 0; RETURN
      SPT = DIALS(1)
      SPTA = (DIALS(1) + 1)*NPT
      SPTB = SPTA + IWIDE
      IF(SPTB .LE. NPT) GO TO 5
      SOV = SPTB - NPT
      SPTA = SPTA - SOV
    5 CONTINUE
C
C     WITH -1<DIALS<+1 GET NUMBER OF LEAD SPOT POINT
C
    9 IMSPT(1) = IHEAD(0,INTSP)
      L = IWIDE* NGM + 2
      DO 10 I = 1,NGM
      K = (I-1)*NPT + 1 + SPTA
      DO 10 J = 1,IWIDE
      IMS(J,I) = IMAGE(K+J)
*     FOR EACH SEISMOGRAM, MAKE THE FIRST POINT OF THE SPOT A MOVE.
*     ALL SUBSEQUENT POINTS WILL BE DRAWS
      IF(J .EQ. 1) IMS(J,I) = LAND(777777768,IMS(J,I))
   10 CONTINUE
      IMSPT(L) = 0
      KSFLG = 1
      GO TO 17
*
*    ZERO THE SPOTLIGHT ARRAY, THUS MAKING EACH POINT A MOVE
*
   15 DO 16 I = 1,NGM
      DO 16 J = 1,IWIDE
   16 IMS(J,I) =0
      K = NGM*IWIDE + 1
      IMSPT(K) = 0
      IMSPT(K+1) = 0
      KSFLG = 0
```

```
   17 CONTINUE
      KSPT = 0
      CALL GRAPHO(IDEV,IMSPT,L,3,IERROR)
      IF(IERROR .NE. 0) OUTPUT(102) IERROR,'GSO'
      CALL TIMETX
      IFLD = 0
      RETURN
C
C
C
      SUBROUTINE COORD
      ICOR(1) = IHEAD(1,INT)
C
C     PLOT Y AXIS
C
      ICOR(2) = IPACK(XO,YO,0)
      YCOR = YO + 1.4
      ICOR(3) = IPACK(XO,YCOR,1)
C
C     PLOT X AXES
C
      DO 10 I = 1,NGM
      XCOR = XO + 1.4
      YCOR = YO + (I-1)*DY
      K = (I-1)*2 + 4
      ICOR(K) = IPACK(XO,YCOR,0)
   10 ICOR(K+1) = IPACK(XCOR,YCOR,1)
      ICOR(K+2) = 0
      CALL GRAPHO(IDEV,ICOR,K+2,2,IERROR)
      IF(IERROR .NE. 0) OUTPUT(102) IERROR,'COR'
      RETURN
C
C
C
C
C
C
      SUBROUTINE INIT
      CALL PAR
      DO 10 I = 1,MAXGM
      IT(I) = ITO(3,I) + 60*(ITO(2,I)+60*ITO(1,I)) + IDELT*(I-1)
      LP(I) = 1
      LPD(I) = 0
      CDS(I) = 0
      VDS(I) = 0
      BIAS(I) = 0.0
      DO 10 J = 1,NPT
   10 Y(J,I) = 0.0
      CALL DTINIT(IDEV, ITDIR, 30,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'DTIN'
```

```
      CALL TIMETX
      CALL DGINIT(IDEV,IGDIR,10,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'DGIN'
      CALL DSPLY
      TRL = 0
      ENCODE(8,20,ITX) TRL
   20 FORMAT(I8)
      CALL TEXTO(IDEV,ITX,2,1,92,1,3,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'ITRL'
      S = NPT*(INC+1)/SR
      ENCODE(8,30,ITX) S
   30 FORMAT(F8.2)
      CALL TEXTO(IDEV,ITX,2,2,92,1,3,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'ISPAN'
      LSTNPT = LSTWID = 0
      LSTNGM = NGM
      CALL COORD
      MPMX = MP(1)
      DO 40 I = 2,NGM
   40 IF(MP(I) .LT. MPMX) MPMX = MP(I)
      MPMX = (MPMX/NPT) + 1
      RETURN
C
C
C
      SUBROUTINE PAR
      NGM = 0
*
*     COUNT THE NUMBER OF GRAMS AND THE NUMBER OF RECORDS PER GRAM
*
      DO 10 I = 1,MAXGM
    5 NGM = NGM + IW(I)
      NREC(I) = MP(I)/LREC
   10 IF(MP(I) .GT. NREC(I)*LREC) NREC(I) = NREC(I) + 1
      I = 0
      DO 20 IJK = 1,MAXGM
      IF(IW(IJK) .EQ. 0) GO TO 20
      I = I + 1
   20 IDGM(I) = IDGRAM(IJK)
      DX = 1.4/NPT
      DY = 1.4/NGM
      IF(SCL .NE. SCLSAV) SCLSAV = SCL; ISCL = 1
      IF(SF .NE. SFSAV) SFSAV = SF; ISCL = 1
      RETURN
C
C
C
C
      SUBROUTINE REMOVE
*
```

```
*      REMOVE HIDDEN LINES FROM GRAPHICS DISPLAY
*
       DO 10 I = 1,NGM
       DO 10 J = 1,NPT
    10 MD(J,I) = 1
       DO 100 I = 1,NGM-1
       DO 100 J = 1,NPT
       DO 100 N = I+1,NGM
       IF(MD(J,N) .EQ. 0) GO TO 100
       IF(    (Y(J,I)-BIAS(I)).GT.(    (Y(J,N)-BIAS(N))+DY*(N-I))) MD(J,N)=
      1 0
   100 CONTINUE
       RETURN
C
C
C
       SUBROUTINE TAPEIP
       IXFDEL = NGM*IDELT
       KSPT=1
       IFLD= 1
       ISGN = 1
       IF(JSW(10).EQ.0) GO TO 20
       ISGN = -1
       DO 10 K = 1,2
       DO 10 I = 1,NGM
       DO 10 J = 1,NREC(I)
    10 CALL BAKREC(ITAPE,1)
    20 DO 30 I = 1,NGM
       LPD(I) = 0
    30 IT(I) = IT(I) + ISIGN(IXFDEL,ISGN)
       RETURN
C
       SUBROUTINE VERSA
       IF(JSW(10) .NE. 0) CALL WEOF(4,0); RETURN
       DO 10 I = 1,400
10     VBUF(I) = 0
       VBUF(1) = NPT
       VBUF(2) = NGM
       VBUF(3) = SF
       VBUF(4) = ITIME(1,1)
       VBUF(5) = ITIME(2,1)
       VBUF(6) = ITIME(3,1)
       VBUF(8) = EVID
       DO 15 I = 1,NGM
15     VBUF(9+I) = Y(1,NGM-(I-1))
       CALL BINOUT(1,VBUF,400,IND)
       DO 30 J = 1,NGM
       DO 20 I = 1,NPT
       CALL UNPACK(IMAGE(1+(J-1)*NPT+I),XVER,YVER,OMVER)
       VBUF(I*2-1) = XVER
```

```
      YVER = LIBR(LAND(YVER,07777777 6B),DMVER)
   20 VBUF(I*2) = YVER
   30 CALL BINBUT(1,VBUF,400,IND)
      RETURN
      END
```

```
        PAGE
A       EQU     5
B       EQU     4
*
*       FØRREC  BAKREC     SPACE THE TAPE EITHER FØRWARD ØR
*       BACKWARD I RECØRDS
*       CALLS      9SETUPN, R/IØPS
*       CALLED BY      MAIN PRØGRAM
*       CALL BAKREC(N,I)    N = UNIT, I = NØ.ØF RECØRDS
*
*
$BAKREC PZE      0
        LDA     BAKREC
        STA     FØRREC
        BRU     FØRREC+1
*
*
$FØRREC PZE     0
        BRM     9SETUPN
        PZE     2
FUNIT   PZE     0                  ;UNIT
FNREC   PZE     0                  ;NØ. ØF RECØRDS
        LDA     *FUNIT
        STA     FUNT
        BRM     ASGN
        PZE     1
FUNT    PZE     0
        LDA     ARFDT
        ADD     =03000000
        STA     FØCAL
        LDA     *FNREC
        SKU     =0
        BRU     RCEND
        LDB     BAKREC
        SKB     =077777            ;GØ BACKWARDS
        BRU     $+2
        CØPY    (-A,A)
        STA     TFDT+4
        BRM     R\IØPS
        PZE     1
FØCAL   PZE     0
        SKN     [illegible]DT
        BRU     [illegible]2
        ØF      [illegible]2
RCEND   S[illegible]      B[illegible]REC
        BRR     FØRREC
        PAGE
*
*       BAKSCN  FØRSCN  SCANS FØRWARD ØR BACKWARD ØN A TAPE FØR A
*       KEYWØRD ØR AN END FILE MARK
```

```
*       CALLS      9SETUPN, R/I8PS, BCDCVT, ASGN
*       CALLED BY      MAIN PR8GRAM
*
*
*
$BAKSCN PZE     0
        LDA     BAKSCN
        STA     F8RSCN
        BRU     F8RSCN+1
*
*
$F8RSCN PZE     0
        BRM     9SETUPN
        PZE     2
SUNIT   PZE     0
SE8F    PZE     0
        STZ     C8UNT
        LDA     *SUNIT
        STA     SUNT
        BRM     ASGN            ;SEARCH SYMB8L TABLE
        PZE     1
SUNT    PZE     0
        LDA     =0600           ;600 - 4 CHARACTER/W8RD
        STA     M8DE            ;ST8RE M8DE IN FDT
PLC1    LDA     =017170000      ;PUT E8F KEYW8RD IN FDT
        STA     TFDT+4
        LDA     *SE8F           ;GET N8. 8F E8F'S
        SKU     =0
        BRU     FEND
        SUB     =1
        STA     C8UNT
PLC2    LDB     BAKSCN
        LDA     ARFDT
        ADD     =02000000
        SKB     =077777         ;SCAN BACKWARDS
        BRU     $+2             ;N8
        ADD     =00100000
        STA     SCNCAL
D8I8    BRM     R\I8PS
        PZE     1
SCNCAL  PZE     0
        SKN     TFDT
        BRU     $+2
        BRU     $-2             ;N8
        LDA     TFDT
        SKU     =06000000       ;BEGIN 8R END TAPE
        BRU     FEND
        LDA     *SE8F
        SKU     =0
        BRU     CNTR
```

```
         LDA      TFDT
         SKE      =010000000
        BRU      D8I8
CNTR     SKR      C8UNT
         BRU      D8I8
         LDA      BAKSCN          ;WAS THERE BACKSCANNING
         SKU      =0
         BRU      FEND
         LDA      SUNIT
         STA      PLC3
         LDA      1
         STA      PLC4
         BRM      F8RREC          ;G8 F8RWARD 1 REC8RD T8 GET PAST THE E8F
         PZE      2
PLC3     PZE      0
PLC4     PZE      0
FEND     STZ      BAKSCN
         BRR      F8RSCN
*
*
C8UNT    PZE      0
         PAGE
*
*        BCDCVT      C8NVERTS A W8RD T8 BCD
*        CALLS      N8NE
*        CALLED BY      ASGN, F8RSCN, BAKSCN
*
*
$BCDCVT PZE       0
         BRM      9SETUPN
         PZE      1
W8RD     PZE      0
         STX      ST8RE,1
         LDX      =0200000-4,1
         LDA      =060606060
         STA      NAMTAB
         STA      NAMTAB+1
CL88P    LDB      W8RD
         ALSB     1
         C8PY     (C,A)
         DIV      =10
         C8PY     (A,B),(B,A)
         STB      W8RD
         LDB      MASK
         STS      NAMTAB
         LDA      NAMTAB
         CRSA      6
         STA      NAMTAB
         BRX      CL88P,1
         BRU      EL88P
```

```
DLOOP   LDA     WORD
        SKE     =0
        BRU     CLOOP
ELOOP   LDX     STORE,1
        BRR     BCDCVT
STORE   PZE     0
MASK    PZE     077
        PAGE
*
*       ASGN      FINDS SYMBOL TABLE ADDRESS OF TAPE UNIT
*       CALLS       R/RSTS
*      CALLED BY    ALL TAPE HANDLING SUBROUTINES
*       WILL CAUSE AN ABORT IF AN ADDRESS CORRESPONDING TO THE  UNIT
*       IS NOT FOUND
*
*
*
$ASGN   PZE     0
        BRM     9SETUPN
        PZE     1
TUNT    PZE     0
        LDA     TUNT
        STA     ASGN1
        BRM     BCDCVT
        PZE     1
ASGN1   PZE     0
ASGN2   BRM     R\RSTS
        PZE     1
        PZE     NAMTAB
         SKU     =0
        BRU     TERR
        STA     TFDT+5
        BRR     ASGN
TERR    LDA     NAMTAB
        STA     MSG+1
        BRM     R\ABRT
        PZE     1
        PZE     MSG
*
*
NAMTAB  TEXT    8,
        PZE     3
*
MSG     PZE     4
        TEXT    16,     NOT FOUND
*
*
*
ARFDT   PZE     TFDT
*
```

```
TFDT    PZE     0
        PZE     0
        PZE     0
MODE    PZE     0
DIRECT  PZE     0
FCB     PZE     0
        PZE     0
*
        PAGE
*
*       BCDIN/OUT   BININ/OUT    READ OR WRITE A TAPE IN EITHER BCD OR
*       BINARY
*       CALLS       ASGN, 9SETUPN, R/IOPS
*       CALLED BY       MAIN PROGRAM
*
$BINOUT PZE     0
        LDA     BINOUT
        STA     BCDOUT
        STA     BCDIN
        LDA     =01
        STA     BINFLG
        BRU     BCDIN+1
*
*
$BININ  PZE     0
        LDA     BININ
        STA     BCDIN
        LDA     =01
        STA     BINFLG
        BRU     BCDIN+1
*
*
$BCDOUT PZE     0
        LDA     BCDOUT
        STA     BCDIN
        BRU     BCDIN+1
*
*
$BCDIN  PZE     0
        BRM     9SETUPN
        PZE     4
BUNIT   PZE     0               ;TAPE UNIT
BBUF    PZE     0               ;BUFFER ADDRESS
BREC    PZE     0               ;RECORD LENGTH
BIND    PZE     0
        STZ     *BIND
        LDA     *BUNIT
        STA     BUNT
        BRM     ASGN
        PZE     1
```

```
BUNT    PZE     0
        LDA     =0600
        LDB     BINFLG
        SKB     =077777         ;IS FLAG SET - BINARY
        BRU     $+2
        ADD     =01000          ;YES
        STA     M8DE
        STZ     BINFLG
        LDA     BBUF
        LDB     *BREC
        STD     TFDT+1
        LDA     ARFDT           ;FDT ADDRESS
        LDB     BCD8UT
        SKB     =077777         ;8UTPUT
        BRU     $+2             ;N8
        ADD     =04000000       ;YES
        STA     BCAL
        STZ     BCD8UT
        BRM     R/I8PS
        PZE     1
BCAL    PZE     0
        SKN     TFDT
        BRU     $+2
        BRU     $-2
        LDB     TFDT
        SKB     =016000000
        BRU     BFIN
        LDA     =01
        STA     *BIND
BFIN    STZ     BINFLG
        BRR     BCDIN
*
*
BINFLG PZE     0
        PAGE
*
*       WE8F      WRITES AN END 8F FILE WITH AN 8PTI8N T8 REWIND THE
*        TAPE AT THE USER'S REQUEST
*       CALLS      8SETUPN, R/I8PS, RWND
*       CALLED BY      MAIN PR8GRAM
*       CALL WE8F(N,IR)      N=UNIT, IR=0 8R 1 - N8 REWIND 8R REWIND
*
*
$WE8F   PZE     0
        BRM     8SETUPN
        PZE     2
        [illegible]
        [illegible]
        [illegible]
        [illegible]
```

```
        BRM     ASGN            ;SEARCH SYMBOL TABLE
        PZE     1
WUNT    PZE     0
        LDA     ARFDT           ;FDT ADDRESS
        ADD     =03100000       ;8P CODE FOR ENDFILE
        LDB     *WFLAG          ;REWIND FLAG
        SKB     =077777
        BRU     $+2
        ADD     =00200000
        STA     WECAL           ;STORE 8P CODE + FDT ADDRESS
        BRM     RNI8PS
        PZE     1
WECAL   PZE     0
        SKN     TFDT
        BRU     $+2
        BRU     $-2
        BRR     WEOF
        PAGE
*
$RWND   PZE     0
        BRM     9SETUPN
        PZE     1
RUNIT   PZE     0
        LDA     *RUNIT
        STA     RUNT
        BRM     ASGN            ;GO SEARCH SYMBL TABLE
        PZE     1
RUNT    PZE     0
        LDA     ARFDT           ;FDT ADDRESS
        ADD     =03200000       ;8P CODE FOR REWIND
        STA     RWCAL          ;STORE IN CALLING SEQUENCE
        BRM     RNI8PS
        PZE     1
RWCAL   PZE     0
        SKN     TFDT
        BRU     $+2
        BRU     $-2
        BRR     RWND
*
*
```

Digital Transform Display

Essentially the same as DSO except for changes in the input parameters and data, the Digital Transform Display or DXD allows the simultaneous display of as many as ten transforms. Transforms are read into the computer and stored on the drum. It is then possible to sweep in any direction through the transforms either in frequency or in time.

Its options are similar to those of DSO and include: namelist, frequency sweep, timesweep, amplitude scaling, trigger, variable frequency resolution, and spotlight.

i. Namelist

When this option is chosen, the user is allowed to modify the value of any namelist parameter. The line-edit capibility provided by the AGT-10 makes this task easy for even the worst typist.

ii. Frequency sweep

With a possible maximum of 200 points per line on the screen at any one time, it is necessary to sweep in frequency to be able to examine the entire spectrum of a long transform at high resolution. This option can be used in either of two modes: automatic frequency sweep in which all transforms are swept in frequency simultaneously, and individual sweep mode for which the sweep of each transform is regulated by one six control dials.

iii. Time sweep

Since each transform covers a certain window in time, to sweep in time will mean to display either younger or older transforms. In this application of time sweep, it is possible to sweep automatically or with the use of variable control dials.

iv. Amplitude scaling

Interactive amplitude scaling is provided with this option, which provides an alternative to amplitude scaling via namelist input. A control dial is used to govern the scaling.

v. Trigger

This option allows the operator to trigger on the amplitudes of the transforms currently being displayed. A control dial is used to set the trigger level.

vi. Variable frequency resolution

As the user of DSO is allowed to expand or contract the timebase of the display, so the user of DXD is allowed to modify the frequency base of the display with a control dial. As few as 10 frequency points can be displayed simultaneously or the entire transform can be averaged in such a way that it fits on the screen. In the latter case, the resolution is usually somewhat diminished.

vii. Spotlight

A spotlight, whose position is regulated by a control dial, is available to help accentuate interesting features of the spectra.

I. DXD - Operating Summary

DXD was designed to illustrate the transforms from a given number of seismograms on an two-dimensional display of amplitude versus frequency. Time control is available through two options: time sweep for individual seismograms and autosweep in time for which all of the seismograms are updated simultaneously.

Used either stand-alone or as an overlay segment, DXD requires that the "GATED" graphics package be activated in the AGT-10. To transfer control to DXD either a save-tape containing the program must be loaded or the appropriate subroutine call must be made. A data tape containing transforms from up to ten seismograms is mounted on the appropriate unit. The user has the option of specifying namelist variables by typing them in on the XDS 9300 teletype console or by loading a prepared card deck and typing:

ICARD = 1

c/r *

c/r

II. Function Switch Definitions

Once the program has been initialized, the AGT-10 console, function switches, and control dials are used for program control. Below are listed the function switch definitions. When control dials are to be used in conjunction with a particular function switch option, they have been indicated in paretheses.

3 - namelist input

This allows the operator to modify namelist parameters from the AGT-10 teletype console.

4 - dial overlay option

Since there are only six control dials and since a maximum of ten transforms can be displayed simultaneously, this function switch allows the operator to use one control dial for more than one transform when one of the sweep options has been selected.

5 - timesweep (all dials

This option allows the user to view either previous or subsequent transforms using the control dials to select the transform of interest.

6 - frequency sweep (all dials)

Each transform can be swept individually in frequency and is governed by the control dials.

7 - scaling (dial D)

As an alternative to namelist, amplitudes may be scaled manually.

8 - trigger (dial C)

The control dial is used to set the trigger level and function switch 10 is used to change the sign of the trigger level. Function switch 15 should be on for triggering from current position; off for triggering from beginning of the transform.

9 - auto sweep

This option causes continuous frequency sweeping of all seismograms. Function switch 10 will reverse the direction of the sweep. By selecting function switch 15, the auto sweep will be applied to the time sweep option rather than the frequency sweep option.

10 - sign option

Used in conjunction with function switches 5, 6, 8, 9, and 11, the sign of the time sweep direction, the frequency sweep direction, or of the trigger amplitude becomes negative.

11 - auto sweep once

A single time sweep or frequency sweep of all of the data is executed. The sweep direction is reversed by selecting function switch 10 and function switch 15 must be on to obtain a time sweep.

12 - span (dial C)

This option expands or contracts the frequency base of the display.

13 - spotlight (dial A)

The control dial is used to position the spotlight at the desired location. When the function switch is turned off, the highlight will remain on and stationary.

14 - remove spotlight

This option turns off the spotlight.

15 - miscellaneous

When this function switch is on the user is allowed to either trigger from the lead point of the data currently being displayed or to use the auto option to sweep in time.

III. Control Parameters

The namelist variables are listed below. For each, the range and default value have been give in parentheses. 'I' has been used to indicate array variables all of which can have up to ten entries. Real variables are indicated by the use of decimal points.

A. Original Data Specifications:

NCH(1-?;2)	number of channels
MP(?;0;I)	maximum number of points on the seismogram
SP(?;20.0)	original sampling rate of data in samples/second

ITO(?,?,?;0,0,0;I)	start time of the data in hours, minutes, and seconds
IDGRAM(?;0;I)	seismogram identification number

B. Mechanical Data Specifications:

ICH(?;1)	channel to be displayed
LREC(1-1024;1024)	length of input record in words
DZONE(0-?;.008)	sensitivity of dials; as DZONE is decreased, the dials become more sensitive

C. Basic Display Specifications

NPT(1-200;200)	number of points to be displayed per line
BIAS(?;0;I)	bias for displayed data
SCL(?;10.0)	scale factor, this scale factor should be used for interactive modification
SF(?;65536)	scale factor for AGT-10 output
INT(1-10;1)	intensity of data display
MAXGM(1-10;10)	maximum number of seismograms that can be displayed

IW(0-1,1,I)	flags choosing which seismograms will be displayed 0-no display ; 1-display

D. Program Control Specifications

ITAPE(0-7;2)	input tape unit number
MTAPE(0-7;0)	rewind specified tape unit
IDEV(1-2;1)	AGT-10 number
ICARD(0-1;0)	read card input
INITL(0-1;0)	reinitialize program
KILL(0-1;0)	return to master program

E. Display Specifications

LP(1-MP;1;I)	lead point of displayed data
X0(?;-0.4)	location of X=0, coordinate and data display
Y0(?;-0.7)	location of Y=0, coordinate and data display
INCR(0-?;100)	lead point increment when using auto sweep
INC(0-?;0)	number of points skipped between each point displayed

F. Spot Display Specifications

IWIDE(1-10;10)	width of spotlight in points

G. Trigger Control Specifications

MAXV(0-2;4096)   maximum value of trigger level

IV. Example of a Change of Control Parameters

Initially the user has the following display:

1. 8 seismograms, numbered 1 through 8 2. INT = 1, the lowest possible intensity on the display 3. INC = 0, one data point per plot point on the screen

The parameters are to be changed to yeild the following:

1. 2 seismograms, numbers 5 and 7

Type

1. IW = 0,0,0,0,1,0,1,0,0,0

or

IW(1) = 0

.

.

.

IW(4) = 0

IW(5) = 1

IW(6) = 0

IW(7) = 1

IW(8) = 0

IW(9) = 0

IW(10) = 0

2. INT = 2, increase screen intensity 3. INC = 2, two data points are averaged to produce one plot point. (Function switch 12 could also have been used.)

```
*
*
*   PROJECT EARTHQUAKE
*
*    SUBTASK DXD - DIGITAL TRANSFORM DISPLAY
*
*
      SUBROUTINE DXD
*
      JSW(I) = LAND(JW,LLS(1,23-I))
      JOFF(I)=LAND(JW,LXOR(-1,LLS(1,23-I)))
*
      DIMENSION Y(200,10),MD(200,10),IBUF(2048),IMAGE(2002),IMG(200,10),
     *           LP(10),MIDLE(10),NRECS(10),NREC(10),LPD(10),
     *          DIALS(10),FDS(10),TDS(10),ITIME(3,10),ITO(3,10),IT(10),
     *          ITX(2),ITDIR(30),IGDIR(10),IMSPT(102),IMS(10,10),
     $          BIAS(10), ICOR(24),IDGM(10),IDGRAM(10),ITXA(7), IW(10)
     *         ,IDT(10),IDTD(10),NXF(10),LXF(10)
*
      EQUIVALENCE (IMAGE(2),IMG), (IMSPT(2),IMS)
      EQUIVALENCE (X0,XC),(Y0,YC)
      EQUIVALENCE (IBUF,MD)
*
      NAMELIST LREC,NPT,IWIDE,BIAS,ITAPE,T,TMSCL,NSGM,
     1          IDEV,LP,MP,XC,YC,ITO,SCL,ICARD,INCR,DZONE,SF,INITL
     2           ,INC,MAXV,INT,MAXGM,IDGRAM,IW,LHXFM,    TMSCL
     3          ,NXF,IDT
      NAMELIST KILL
*
      DATA NULL/-1/,LREC/2048/,MAXV/4096/,DZONE/.0030/,IDEV/1/,
     *     ITAPE/2/,IWIDE/10/,XC/-0.4/,YC/-.7/,SR/20./,SCL/10./,NPT/200/,
     *     INC/0/,INT/1/,INTSP/10/,DX/0.007/,INCR/25/,SF/1/,
     *     LHXFM/512/,ICURS/0/
      DATA KILL/0/
*
      INTEGER TRL
C
C     PARAMETER  INPUT
C
   10 INITL = 1
      OUTPUT(102) 'PARAMETER  INPUT'
      INPUT(101)
   20 IF(ICARD .EQ. 1) ICARD = 0 ; INPUT(5)
      IF(INITL .EQ. 0) GO TO 100
   30 CALL INIT
C
C     READ INPUT TAPE
C
      INITL = 0
      DO 90 I = 1,NSGM
```

```
      MREC = 0
      D8 35 N = 2,I
   35 MREC = MREC + NREC(N-1)
      IFILE = 10 + MREC
      D8 50 K = 1,NREC(I)+1
      D8 45 J=1,IXF
      CALL BININ(ITAPE,IBUF(LHXFM*(J-1)+1),LHXFM,IND)
      IF(IND .EQ. 0) G8 T8 45
      IF(J .EQ. 1) G8 T8 90
      CALL WRITE(IFILE,IBUF,LREC)
      G8 T8 90
   45 C8NTINUE
      CALL WRITE(IFILE, IBUF,LREC)
   50 IFILE = IFILE + 1
   90 C8NTINUE
C
C     SETUP DISPLAY BUFFER
C
      IFLD = 1
  100 I = 0
      D8 160 IJK = 1,MAXGM
      IF(IW(IJK) .EQ. 0) G8 T8 160
      I = I + 1
*
*     IF THE SCALE HAS BEEN CHANGED, UPDATE DISPLAY
*
      IF(ISCL .NE. 0) G8 T8 101
*
*     IF REINITIALIZATI8N 8R LEAD P8INT CHANGE, UPDATE DISPLAY
*
      IF((IDTD(I) .EQ. IDT(I)) .AND. (LP(I) .EQ. LPD(I))) G8 T8 160
  101 IDTD(I) = IDT(I)
      LPD(I) = LP(I)
      MREC = 0
      D8 115 N = 2,IJK
  115 MREC = MREC + NREC(N - 1)
      NRECS(I) = NREC(IJK)
      IDLE = (IDT(I) - 1)/IXF
      IFILE = 10 + MREC + IDLE
      CALL READD(IFILE, IBUF, LREC)
      MIDLE(I) = (IDT(I) - IDLE*IXF - 1)*LHXFM
      D8 130 J = 1,NPT
      IR = LP(I) + (J-1)*(INC+1) + MIDLE(I)
      IF(IR.GT.MIDLE(I)+LHXFM)G8 T8 120
      Y(J,I) = IBUF(IR)*SCL/SF
      G8 T8 130
*
*     STUFF ZER8S INT8 THE DISPLAY
*
  120 Y(J,I) = 0.0
```

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```
  150 CØNTINUE
  160 CØNTINUE
      ISCL = 0
C
C     DISPLY BUFFER
C
      IF(IFLD .EQ. 0) GØ TØ 165
      CALL TIMETX
      CALL REMØVE
      CALL DSPLY
  165 IF(KSFLG .EQ. 0) GØ TØ 170
      IF(KSPT .NE. 0) CALL SPØT
      KSPT = 0
  170 CØNTINUE
C
C     SENSE FUNCTIØN SWITCH ØPTIØN
C
C     FUNCTIØN SWITCH ASSIGNMENT
C     3  NAMELIST INPUT
C     4  DIAL ØVERLAY ØPTIØN
C     5  TIME SWEEP - ALL DIALS
C     6  FREQUENCY SWEEP  -  ALL DIALS
C     7  AMPLITUDE SCALING  -  DIAL 4
C     8  TRIGER  -  DIAL 3
C     9  AUTØ SWEEP
C     10  DIRECTIØN ØF SWEEP
C     11  SINGLE SWEEP
C     12 FREQUENCY BASE - DIAL 3
C     13  SPØTLIGHT  -  DIAL 1
C     14  REMØVE SPØTLIGHT
C     15 TRIGGER FRØM CURRENT LP, ØR AUTØ SWEEP IN TIME
C     16  UNUSED
C
  200 CALL FNS(IDEV,ISW,IER)
      IF(IER .NE. 0) ØUTPUT(102) IER,'ISW'
      JSW = LXØR(JSW,ISW)
      LB = NGM + 3
      DØ 220 I = 3,16
      IF(JSW(I) .EQ. 0) GØ TØ 220
      ENCØDE(4,210,ITX) I
  210 FØRMAT(I2)
      CALL TEXTØ(IDEV,ITX,1,LB,1,1,3,IER)
      IF(IER .NE. 0) ØUTPUT(102) IER,'SW'
      LB = LB + 1
  220 CØNTINUE
      DØ 230 I = LB, NGM + 16
      CALL TEXTØ(IDEV,NULL,1,I,1,1,3,IER)
      IF(IER .NE. 0) ØUTPUT(102) IER,'NUL'
  230 CØNTINUE
      CALL VCD(IDEV,DIALS, IER)
```

```
      IF(IER .NE. 0) OUTPUT(102) IER,'VCD'
C
      IFLD = 1
*
*     TEST FØR NAMELIST INPUT
*
  300 IF(JSW(3) .EQ. 0) GØ TØ 310
      IB = NGM + 17
      CALL GINPUT(IDEV, ITDIR,IB)
      CALL PAR
      JW = JØFF(3)
      IF(KILL .NE. 0) KILL = 0; RETURN
      IF(LSTNGM .NE. NGM) CALL INIT
      GØ TØ 100
  310 IF(JSW(5) .NE. 0) CALL TIMESWP; GØ TØ 100
      IF(JSW(6) .NE. 0) CALL FREQSWP; GØ TØ 100
      IF(JSW(7) .NE. 0) CALL SCALE; GØ TØ 100
      IF(JSW(8) .NE. 0) CALL TRIGER; JW = JØFF(8); GØ TØ 100
      IF(JSW(9) .NE. 0) CALL AUTØ; GØ TØ 100
      IF(JSW(11).NE. 0) CALL AUTØ; JW=JØFF(11); GØ TØ 100
      IF(JSW(12).NE. 0) CALL SPAN; GØ TØ 100
      IF(JSW(13) .NE. 0) KSPT = 0; CALL SPØT; GØ TØ 100
      IF(JSW(14) .NE. 0) CALL SPØT; GØ TØ 100
      GØ TØ 200
*
*
*
      SUBRØUTINE SCALE
      IF(ABS(DIALS(4) - SCLD) .LT. DZØNE) IFLD = 0; RETURN
      SCLD=DIALS(4)
      SCL=(1.0+SCLD)*10.0
      DØ 10 I=1,NGM
   10 LPD(I) = -1
      KSPT = 1
      RETURN
*
*
*
      SUBRØUTINE TRIGER
      ISGN = 0
*
*     MAXV IS THE UPPER LIMIT ØF THE TRIGGER LEVEL
*
      TRL =(DIALS(3) +1)*MAXV/2
      I = 0
      DØ 30 IJK = 1,MAXGM
      IF(IW(IJK) .EQ. 0) GØ TØ 30
      I = I + 1
      MREC=0
      DØ 10 J = 2,IJK
```

```
   10 MREC = MREC + NREC(J-1)
      DØ 20 K=1,NREC(I)
      IFILE=10+MREC  + (K-1)
      CALL READD(IFILE,IBUF,LREC)
      IST = 1
*
*     ØPTIØN TØ TRIGGER FRØM CURRENT LEAD PØINT
*
      IF(JSW(10) .NE. 0) IST = LP(I)
      DØ 20 KK = IST,LHXFM
      L = KK + MIDLE(I)
      IF((IBUF(L)*(SCL/SF) - TRL) .GE. 0) LP(I) = KK; GØ TØ 30
   20 CØNTINUE
*
*     IF NØ TRIGGER LEVEL IS FØUND, SET THE LEAD PØINT TØ THE LAST
*     PØINT ØF THE GRAM
*
      LP(I) = LHXFM
   30 CØNTINUE
      ENCØDE(8,100,ITX)TRL
100   FØRMAT(I8)
      CALL  TEXT9(IDEV,ITX,2,1,92,1,3,IER)
      IF(IER.NE.0)ØUTPUT(102)IER,'TRL'
      KSPT = 1
  200 RETURN
*
*
*
      SUBRØUTINE TIMESWP
*
*     MØVE THRØUGH THE TRANSFØRMS IN TIME
*
      IFLD = 0
      N1=NGM
      N2=0
      IF(NGM.GT.6)N1=6;N2=NGM-6
      IF(JSW(4).NE.0)GØ TØ 20
*
*     DØ TRANSFØRMS 1 TØ 6
*
      DØ 10 I=1,N1
      IF(ABS(DIALS(I) - TDS(I)) .LT. DZØNE) GØ TØ 10
      TDS(I) = DIALS(I)
      IDT(I) = (1.0 + DIALS(I))*LXF(I)/2+1
      IF(IDT(I) .LT. 1) IDT(I) = 1
*
*     INSURE DISPLAY AND SPØTLIGHT UPDATE
*
      IFLD = 1
      KSPT = 1
```

```
10    CONTINUE
      RETURN
*
*     DO TRANSFORMS 7 TO 10
*
20    DO 30 I=1,N2
      IF(ABS(DIALS(I)    - TDS(I+6)) .LT. DZONE) GO TO 30
      TDS(I+6) = DIALS(I)
       IDT(I+6) = (1.0 + DIALS(I)   )*LXF(I+6)/2+1
      IF(IDT(I+6) .LT. 1) IDT(I+6) = 1
*
*     INSURE DISPLAY AND SPOTLIGHT UPDATE
*
      IFLD = 1
      KSPT = 1
30    CONTINUE
      RETURN
*
*
*
      SUBROUTINE FREQSWP
*
*     CHANGE FREQUENCIES DISPLAYED FOR THE CURRENT TRANSFORM
*
      IFLD = 0
      N1=NGM
      N2=0
      IF(NGM.GT.6)N1=6;N2=NGM-6
      IF(JSW(4).NE.0)GO TO 20
*
*     DO TRANSFORMS 1 TO 6
*
      DO 10 I=1,N1
      IF(ABS(DIALS(I) - FDS(I)) .LT. DZONE) GO TO 10
      FDS(I) = DIALS(I)
      LP(I) = (1.0 + DIALS(I))*(LHXFM/2)
      IF(LP(I) .LT. 1) LP(I) = 1
*
*     INSURE DISPLAY AND SPOTLIGHT UPDATE
*
      KSPT = 1
      IFLD = 1
10    CONTINUE
      RETURN
*
*     DO TRANSFORMS 7 TO 10
*
20    DO 30 I=1,N2
      IF(ABS(DIALS(I)    - FDS(I+6)) .LT. DZONE) GO TO 30
      FDS(I+6) = DIALS(I)
```

```
      LP(I+6) = (1.0 + DIALS(I)   ) * (LHXFM/2)
      IF(LP(I+6) .LT. 1) LP(I+6) = 1
*
*     INSURE DISPLAY AND SPOTLIGHT UPDATE
*
      KSPT = 1
      IFLD = 1
30    CONTINUE
      RETURN
*
*
*
      SUBROUTINE AUTO
*
*     AUTOMATIC SWEEP IN TIME OR FREQUENCY
*
      ISGN=0
*
*     FUNCTION SWITCH  DETERMINES DIRECTION
*
      IF(JSW(10).NE.0)ISGN=-1
      IF(JSW(15) .NE. 0) GO TO 20
*
*     SWEEP IN FREQUENCY
*
      DO 10 I=1,NGM
      LP(I)=LP(I)+ISIGN(INCR,ISGN)
      IF(LP(I) .LT. 1) LP(I) = 1
      IF(LP(I) .GT. LHXFM) LP(I) = LHXFM
   10 CONTINUE
      KSPT = 1
      RETURN
*
*     SWEEP IN TIME
*
   20 DO 30 I = 1,NGM
      IDT(I) = IDT(I) + ISIGN(1,ISGN)
      IF(IDT(I) .GT. LXF(I)) IDT(I) = LXF(I)
      IF(IDT(I) .LT. 1) IDT(I) = 1
   30 CONTINUE
      KSPT = 1
      RETURN
*
*
*
      SUBROUTINE SPAN
*
*     EXPAND OR CONTRACT THE FREQUENCY BASELINE
*
      IF(ABS(DIALS(3) - SPN) .LT. DZONE) IFLD = 0;RETURN
```

```
      SPN = DIALS(3)
      IF(SPN .LE. 0) GO TO 20
*
*     EXPAND THE TRANSFORM
*
   10 NPT = (1-SPN)*200
      IF(NPT .LT. 10) NPT = 10
      DX = 1.4/NPT
      INC = 0
      GO TO 30
*
*     CONTRACT THE TRANSFORM
*
   20 NPT = 200
      MIRC = LHXFM/NPT
      IF(MIRC*NPT .LT. LHXFM) MIRC = MIRC + 1
      INC = (ABS(SPN))*MIRC
      DX = 0.007
*
*     DISPLAY THE FREQUENCY  RANGE BEING DISPLAYED
*
   30 S = (NPT/T)*(INC+1)
   35 ENCODE(8,100,ITX) S
  100 FORMAT(F8.2)
      CALL TEXT9(IDEV,ITX,2,2,92,1,3,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'SPAN'
      DO 200 I = 1,NGM
  200 LPD(I) = 0
      KSPT = 1
      RETURN
*
*
*
      SUBROUTINE TIMETX
      DO 20 NM = 1,NGM
      I = NGM - (NM -1)
*
*     COMPUTE THE TIME OF EACH TRANSFORM
*
      K=IT(I)+(IDT(I)-1)*TMSCL
      ITIME(1,I) = K /3600
      ITIME(2,I) = (K-ITIME(1,I)*3600)/60
      ITIME(3,I) = K - ITIME(1,I)*3600 - ITIME(2,I)*60
      IAMP = Y(1,I)*(SF/SCL)
      FRQ = LP(I)/T
*
*     IF THE SPOTLIGHT IS ON, DISPLAY THE TIME AT THE CENTER OF THE CURSOR
*
      IF(ICURS .NE. 0) FRQ = FRQ + (SETA + (IWIDE/2))/T
      ENCODE(28,100,ITXA) IDGM(I),ITIME(1,I),ITIME(2,I),ITIME(3,I),
```

```
     1 FRQ,IAMP
 100 FORMAT(A4,' ',I2,' ',I2,' ',I2,'  ',F7.4,' ',I5)
     CALL TEXTO(IDEV,ITXA,7,NM,1,1,3,IERROR)
     IF(IERROR .NE. 0) OUTPUT(102) IERROR,'TXO'
  20 CONTINUE
     RETURN
*
*
*
C     A SUBROUTINE TO DISPLAY GRAPHICAL DATA
C     CALLS  IHEAD, IPACK,GRAPHO
C
     SUBROUTINE DSPLY
     IMAGE(1) = IHEAD(0,INT)
     L = NPT*NGM + 2
     MKZO = LSTNPT - NPT
     DO 15 I = 1,NGM
     K = (I - 1)*NPT + 1
*
*    COMPUTE THE VERTICLE SPACING OF EACH LINE
*
     YV = YO + (I-1)*DY
     DO 10 J = 1,NPT
     XIM = XO + DX*(J - 1)
     YIM = YV + Y(J,I) - BIAS(I)
     IF(J.NE. 1) GO TO 9
*
*    MAKE THE FIRST POINT OF EACH LINE A MOVE
*
     IMAGE(K+J) = IPACK(XIM,YIM,0)
     GO TO 10
   9 IMAGE(K+J) = IPACK(XIM,YIM,MD(J,I))
  10 CONTINUE
  15 CONTINUE
     IMAGE(L) = 0
     DO 20 I = 1,MKZO*NGM
     IMAGE(L+I) = 0
  20 CONTINUE
     CALL GRAPHO(IDEV, IMAGE,L, 1, IER)
     IF(IER .NE. 0) OUTPUT(102) IER,'GPO'
     LSTNPT = NPT
     RETURN
C
C
C
*
*    SPOTLIGHT A CERTAIN BAND OF EACH TRANSFORM READING OUT THE FREQUENCY
*    AT THE CENTER OF THE SPOTLIGHT
*
     SUBROUTINE SPOT
```

```
      ICURS = 1
      IF(JSW(14) .NE. 0) ICURS = 0; GO TO 15
*
*     WHEN THE KSPT FLAG IS ON, THE SPOTLIGHT WILL BE UPDATED WITHOUT
*     READING THE AGT DIALS
*
      IF(KSPT .NE. 0) GO TO 9
*
*     READ THE AGT DIALS
*
      IF(ABS(DIALS(1) - SPT) .LT. DZONE) IFLD = 0; RETURN
      SPT = DIALS(1)
      SPTA = (DIALS(1) + 1)*NPT
      SPTB = SPTA + IWIDE
      IF(SPTB .LE. NPT) GO TO 5
      SOV = SPTB - NPT
      SPTA = SPTA - SOV
    5 CONTINUE
C
C     WITH -1<DIALS<+1 GET NUMBER OF LEAD SPOT POINT
C
    9 IMSPT(1) = IHEAD(0,INTSP)
      L = IWIDE* NGM + 2
      DO 10 I = 1,NGM
      K = (I-1)*NPT + 1 + SPTA
      DO 10 J = 1,IWIDE
      IMS(J,I) = IMAGE(K+J)
      IF(J .EQ. 1) IMS(J,I) = LAND(77777776B,IMS(J,I))
   10 CONTINUE
      IMSPT(L) = 0
      KSFLG = 1
      GO TO 17
*
*     ZERO THE SPOTLIGHT ARRAY, THUS MAKING EACH POINT A MOVE
*
   15 DO 16 I = 1,NGM
      DO 16 J = 1,IWIDE
      IMS(J,I) =0
   16 CONTINUE
      K = NGM*IWIDE + 1
      IMSPT(K) = 0
      IMSPT(K+1) = 0
      KSFLG = 0
   17 CONTINUE
      KSPT = 0
      CALL GRAPHO(IDEV,IMSPT,L,3,IERROR)
      IF(IERROR .NE. 0) OUTPUT(102) IERROR,'GSO'
      CALL TIMETX
      IFLD = 0
      RETURN
```

```
C
C
C
      SUBROUTINE COORD
      ICOR(1) = IHEAD(1,INT)
C
C     PLOT Y AXIS
C
      ICOR(2) = IPACK(XO,YO,0)
      YCOR = YO + 1.4
      ICOR(3) = IPACK(XO,YCOR,1)
C
C     PLOT X AXES
C
      DO 10 I = 1,NGM
      XCOR = XO + 1.4
      YCOR = YO + (I-1)*DY
      K = (I-1)*2 + 4
      ICOR(K) = IPACK(XO,YCOR,0)
      ICOR(K+1) = IPACK(XCOR,YCOR,1)
   10 CONTINUE
      ICOR(K+2) = 0
      CALL GRAPHO(IDEV,ICOR,K+2,2,IERROR)
      IF(IERROR .NE. 0) OUTPUT(102) IERROR,'COR'
      RETURN
C
C
C
C
C
C
      SUBROUTINE INIT
*
*     INITIALIZE THE GRAPHICS DISPLAY AND PROGRAM OPERATIONS
*
      CALL PAR
      DO 10 I = 1,MAXGM
      IT(I) = ITO(3,I) + 60*(ITO(2,I)+60*ITO(1,I))
      LP(I) = 1
      LPD(I) = 0
       ICT(I) = 1
      ICTD(I) = 0
      FDS(I) = 0
      TDS(I) = 0
      BIAS(I) = 0.0
      DO 10 J = 1,NPT
      Y(J,I) = 0.
      MD (J,I) = 1
      IF (J .EQ. 1) MD(1,I) = 0
   10 CONTINUE
```

```
      CALL DTINIT(IDEV, ITDIR, 30,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'DTIN'
      CALL TIMETX
      CALL DGINIT(IDEV,IGDIR,10,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'DGIN'
      CALL DSPLY
      TRL = 0
      ENCODE(8,20,ITX) TRL
   20 FORMAT(I8)
      CALL TEXTO(IDEV,ITX,2,1,92,1,3,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'ITRL'
      S = NPT*(INC+1)/T
      ENCODE(8,30,ITX) S
   30 FORMAT(F8.2)
      CALL TEXTO(IDEV,ITX,2,2,92,1,3,IER)
      IF(IER .NE. 0) OUTPUT(102) IER,'ISPAN'
      LSTNPT = LSTWID = 0
      LSTNGM = NGM
      CALL COORD
      RETURN
C
C
*     COMPUTE PARAMETERS NECESSARY FOR PROGRAM OPERATION
C
      SUBROUTINE PAR
      DO 10 I=1,NSGM
*
*     NSF - NUMBER OF TRANSFORMS PER GRAM
*     IXF - NUMBER OF TRANSFORMS PER 2048 (I.E. PER DRUM FILE)
*     NREC - NUMBER OF DRUM FILES
*
      IXF = LREC/LHXFM
      NREC(I)=NXF(I)/IXF
      IF(NXF(I).GT.NREC(I)*IXF) NREC(I)=NREC(I)+1
10    CONTINUE
      NGM = 0
      I = 0
      DO 20 IJK = 1,MAXGM
      IF(IW(IJK) .EQ. 0) GO TO 20
      I = I + 1
      NGM=NGM+1
      IDGM(I) = IDGRAM(IJK)
      LXF(I)=NXF(IJK)
   20 CONTINUE
      DX = 1.4/NPT
      DY = 1.4/NGM
      IF(SCL .NE. SCLSAV) SCLSAV=SCL; ISCL = 1
      IF(SF .NE. SFSAV) SFSAV = SF; ISCL = 1
      RETURN
C
```

```
C
C
C
      SUBRØUTINE REMØVE
      DØ 10 I = 1,NGM
      DØ 10 J = 1,NPT
   10 MD(J,I) = 1
      DØ 100 I = 1,NGM-1
      DØ 100 J = 1,NPT
      DØ 100 N = I+1,NGM
      IF(MD(J,N) .EQ. 0) GØ TØ 100
      IF(    (Y(J,I)-BIAS(I)).GT.(    (Y(J,N)-BIAS(N))+DY*(N-I))) MD(J,N)=
     1 0
  100 CØNTINUE
      RETURN
C
C
C
      SUBRØUTINE DUMMY; RETURN
C
      END
```

On-Line Extended Signal Processing

This is a revision of the Extended Signal Processing program, which was originally written for acoustic data. The prime motivation for restructuring ESP was the very considerable amount of time required to process the seismic data. Previously, the fast Fourier transforms were taken as a separate step in the data analysis and were stored on magnetic tape. For data sets consisting of hundreds of thousands of sample points, separate computation of the transforms is reasonable; however, when the data consisted of only a few thousand points, the overhead in terms of man hours for magnetic tape manipulation is excessive. Thus a version of ESP was written which calls a subroutine to preform the transforms on the time data, sending the results back to ESP for display.

Another improvement in ESP was the addition of a multiple input file capibility allowing the user to move from one seismogram to the next with ease. Previous versions of ESP had required complete program reinitialization before a new data set could be processed.

A useful addition to the program was its hard-copy option. Any picture on the AGT screen could be read out onto magnetic tape for subsequent processing on the PDP 11/50 to produce line drawings on the Versatec printer-plotter. This option is particularly useful when qualitative comparison of many siesmic spectra is desired.

To provide the user with greater flexibility in data handling, the NIFTY tape handling package was included in the On-Line-ESP package.

The basic function of ESP itself is to provide a versatile display of transformed signals in three dimensions. Unlike DXD, it allows the user to study, for one seismic record, the dynamic characteristics of the signals in both the frequency and time domains. Options are chosen using the AGT-10 function switches and often require the control dials. Since ESP does not use the standard package of graphics subroutines, it differs in some respects from DSO and DXD.

i. Namelist

This option is always operative and does not have to be signaled by a function switch. When a * carriage return is issued by the operator, all newly specified namelist parameters are updated in the program.

ii. Input halt

Unless this option is selected, the program will continue to compute transforms and update the display. Thus when something of interest appears on the screen, it is possible to stop and inspect the transforms in greater detail.

iii. Amplitude Scaling

halting the display update process and allowing the operator to modify the scale factor of the displayed data, this option provides an easy alternative to scaling through namelist.

iv. Frequency sweep

With both automatic and single sweep modes, the operator can inspect all frequencies of the display despite the fact that the transforms may be too long to allow the entire spectrum to appear on the screen at once.

v. Spotlight

Control dials are used to set up to three spotlights on the desired frequencies. As the display is updated, interesting or promising frequencies are accentuated.

vi. Hardcopy

At any time the operator may choose to record the display on magnetic tape for subsequent processing into hardcopy output. It adds to the versatility of the program since not all analysis needs to be done in the laboratory.

vii. Harmonic display

This option is useful in some applications by allowing the operator to examine and spotlight the time history of selected frequency harmonics. It was not

extensively used in this project.

I. On-Line ESP - Operating Summary

On-line ESP was written to save time and space during the processing of seismic data. As an alternative to the three-step process of performing the transforms, storing them on magnetic tape, and finally displaying them using ESP, a program has been written which performs the transforms and supplies them to ESP as they are needed. The only tape necessary is that containing the original time data; however, it is possible to create an output tape containing x-y pairs for plotting on the Versatec Matrix Plotter.

Because of the limitations of the core size of the XDS 9300, On-Line-ESP was written as an overlay package. It consists of a main segment and three primary overlay segments: ESP, XFORM, and NIFTY. ESP is the basic display program, XFORM computes the Fast Fourier transforms of the seismic data, and NIFTY is used for tape manipulation.

II. Program Modules

A. NIFTY

This is an all-purpose tape handling package. It can be called prior to the first processing of the data or can be called from ESP. Upon returning from NIFTY, control is

transfered directly to the beginning of ESP. It is the user's responsibility to position the input tape at a header record when completing use of NIFTY. The data tapes used in this project have one seismogram per file, so positioning at the beginning of a file is sufficient. If the multiple file option of ESP is being used, the program will require parameter input and a card deck should be ready when it is reentered. If no parameter update is necessary, a "*" card is sufficient.

NIFTY asks for commands, which can be any of the following:

1. RECORDS = 1	space forward or backward a given number of records
2. FILES = 1	space forward or backward a given number of files
3. TAPRWD = 1	rewind a tape
4. WRTEOF = 1	write an end of file
5. DUMP = 1	read a tape and dump on line printer
6. COPY = 1	copy one tape to another tape

Subsequent instructions to the user will be issued after '* c/r' has been typed on the control console.

B. XFORM

This program performs the transforms. It receives all of its parameters from ESP. Most of the parameters are given in the header record; however, there are a few which should be specified when ESP is initialized:

LFT - length, in points, of the transform

LAG - lag, in points, between transforms

NONOISE - the number of transforms to be averaged together to create the mean noise transform, which will be subtracted from all of the transforms prior to their being displayed on the AGT. If NONOISE = 0, the transforms will be displayed without noise subtraction. If NONOISE = 1000 all of the transforms will be used to find the mean noise transform.

Transforms will be taken for as much data as possible. The maximum number of possible transforms will depend upon their length and the lag between the transforms:

number of transforms = (number of sample points - LFT)/LAG .

Because the overlay system requires a non-trivial amount of time to transfer from one program module to another, it was found that program efficiency could be improved by storing transforms on the drum. While in XFORM, transforms are stored on the drum in a 1K word data area. Thus if the transform length is 256 points, eight transforms could be stored. The mirror image half of the transform having been discarded. When control returns to ESP, the drum is read and the transforms are displayed with the maximum speed.

C. ESP

This is the Extended Signal Processing Fourier Transform

display program. A maximum of ten transforms are displyed simultaneously within a three dimensional plot The x axis is frequency, the y axis is amplitude or power, and the z axis is time. An excellent hidden line removal algorithm developed by Albert Wong allows the display to be rotated and scaled with no distortion of the image. Its jobs are to request transforms from XFORM and to communicate with the AGT either to change its display parameters or to send it new transforms.

Because of its interactive capibilities, many parameters must be specified when the program is initialized and most can be changed to modify the appearance of the display. These parameters are listed below. Many parameters are initialized within the program and others are given their values via card input. For the latter group, each parameter is followed by its default value in brackets.

Function Switch Options

The program's dynamic interactive capibility is provided by the function switches, control dials, and teletype console available on the AGT-10. The function switches are listed below with their corallary control dials indicated when applicable.

1 - restart

Flags will be set for program reinitialization. The user is given the opportunity to modify namelist parameters before proceeding.

2 - sideline display

The most recently displayed transform is given an additional separate display on a section of the screen. This allows the operator to inspect each transform as it appears with greater detail.

3 - rotation (dial C)

While this function switch is on, dial C may be used to rotate the display through 180 . The hidden line removal algorithm will help to yeild a display which can be viewed from the sides as well as in a waterfall.

4 - display loop

Update of the display is continuous unless this function switch is on. The use of this function switch allows the operator to examine certain spectra in more detail and to apply other function switch options for enhancement of the data.

5 - spotlight adjust (dials A, B, and C)

As many as three spotlights may be displayed simultaneously. The spotlight adjust option allows the user to reposition the spotlights using the control dials.

6 - harmonic option

This function switch causes the spotlights to move simultaneously while they are separated from each other by a specified harmonic factor.

7 - spotlight display

The spotlight option is turned on and off with this function switch. Current initialization proceedures cause the spotlight to be on when the display begins.

8 - amplitude scaling (dials D, E, and F)

Control dials are used to alter the amplitude of the display. Because up to three data windows may be displayed concurrently, their amplitude scaling is regulated separately by three different control dials.

9 - frequency sweep

This option caused continuous frequency sweeping of all spectra being displayed. Function switch 10 is used to reverse the direction of the sweep. When the frequency sweep option is turned off the lead point frequency of the display will remain at the chosen frequency as the display is updated.

10 - direction of sweep

Use of this function switch reverses the direction of the frequency sweep in either the continuous or single sweep mode.

11 - single sweep

The user is allowed to sweep the data in frequency one frequency increment with this function switch. Selection of function switch 10 will cause a reversal of the sweep direction.

13 - hard-copy

Each time that this function switch is depressed the

x-y coordinates of the current display are output to magnetic tape with a header record.

14 - endfile on hard-copy tape

This option allows the user to put an end of file mark on the hard-copy output tape. The plotting program expects an end of file mark at the termination of all data sets. The output tape will be rewound after the end of file is written.

Control parameters

ISFQ(?;512)	sampling rate in points per second (10)
NBC	number of box car averages (1) Several transforms may be averaged together to produce a spectrum on the screen.
MDLAY(?;10000)	scaling parameter
N1(?;1)	averaging parameter
WOINT(?;1.0)	sideline window intensity on AGT-10
ISQRT(0,1;1)	power option Power, the squares of the amplitudes of the Fourier coefficients, will be displayed on the AGT-10.
SLINT(?,1.0)	sideline intensity on AGT-10
SINT(?;1.0)	line intensity on AGT-10
WINT(?;0.5)	window intensity on AGT-10
LFT(?;8192)	length of transform in points

LAG(?;512)	lag between transforms in points
STRT1(?;3.5)	frequency of leadpoint of first window
IEOF(0,1;0)	flag to indicate multiple file input tape
ITAPE(?;1)	input tape unit number
LG10(0,1;0)	flag to take base 10 logarithm of transform before displaying it
LGNAT(0,1;0)	flag to take the base e log of the transform before displaying it
STRT2	frequency of the lead point of the second window
STRT3	frequency of the lead point of the third window
SAMPTS	number of sample points on time sequence (read from header record)
LGCNT	transform counter
LREC(?;1024)	length of input record
INITL(0,1;0)	initialization flag
ICARD(0,1;0)	card input flag
IREP(0,1;0)	repeat flag
IREWIND(0,1:0)	rewind flag
CSPI(0,1;0)	flag to obtain transforms from CSPI-125 (inoperative)
KNIFTY(0,1;0)	flag to signal transfer to NIFTY subroutine package
NONOISE(?;0)	noise subtraction from transforms

(see XFORM description)

Display parameters

IWIDE(?;10)	width of spotlight in points
NSL(0-3;2)	number of spotlights
ISWEEP	frequency sweep option
SWINC(?)	frequency sweep increment in Hz
SWU(?)	upper limit of frequency sweep
SWL(?)	lower limit of frequency sweep
ISCL(?;500)	inverse scale factor for display
NPT(0-150;128)	number of points per line on AGT display
LINE(0-10;10)	number of lines of transforms on AGT display
NGRP	number of harmonic groups
HARM1	harmonic window 1
HARM2	harmonic window 2
LSD(0,1;0)	side-line display option

Movie parameters

NFRAM	number of frames per second
NSHUT	shutter speed

Output parameters

IDATE	date: month, day, year
ISITE	site identification in BCD

Input Tape Format

Each sequence of time data must be preceeded by a standard header record in which the following parameters are specified:

word	value
1	number of 1024 records of time data If the number of sample points is not evenly divisible by 1024, an additional record is used.
2	event identification
3	date - month
4	date - day
5	date - year
6	site identification
7	number of channels
8	total number of sample points on seismogram
9	sampling rate in samples per second
10	time - hours
11	time - minutes
12	time - seconds

The header record is followed by the time samples which are

divided into records having a length of 1024 words. If not completely filled, the last record will be padded with zeros.

Hard-copy Output Tape Format

If data for plotting on the Versatek are desired, they may be recorded on magnetic tape and then taken to the PDP 11/50 system for further processing. Each record is 300 words long and all words are right justified. A complete plot will consist of eleven records: one header record and ten data records. The header record has the following format:

word	value
1	number of points per line
2	number of lines
3	x-increment (AGT)
4	y-increment (AGT)
5	current line pointer (AGT)
6	number of spotlights
7	center of spotlight 1
8	center of spotlight 2
9	center of spotlight 3
10	start time - hours
11	time - minutes
12	time - seconds

13	length of transform
14	lag between transforms
15	sampling rate of data
	site identification (BCD)
17	site identification (BCD)
18	site identification (BCD)
19	lead point of data currently being displayed on AGT
20	scale factor
21	date - month
22	date - day
23	date - year

The data records will consist of up to 150 x-y pairs per record.

To operate On-Line FSP:

1. mount program tape on MT3A and use a rerun deck to enter it
2. mount the input tape on MT1A and, if desired, an output tape on MT2A
3. a message will appear on the control console

   'SET UP AGT FOR FSP'
4. carry out this instruction by
   a. typing on the AGT control console

      RESET(4,3)!
   b. when disk activity has ceased, type

      FSP93!

Fast Fourier Transform Control Program

XFORM - Operating Summary

This program performs transforms on earthquake data. The description given here is for its stand-alone operation for which data are
input from and output to magnetic tape. The spacing, in points, between transforms can be specified by the user. The number of records for each time trace must be specified, NOREC, as well as the total number of grams to be transformed, NGM.

OPERATING PROCEDURE:

This program is part of the EARTHQUAKE overlay package. It is called when

COMMAND ME is followed by

XFORM

with this program operating in core the user is issued a command for

PARAMETER INPUT

for which there are two options to type in on the terminal:

ICARD=0 resulting in no parameter input (in most cases an error)

ICARD=1 resulting in input from the card reader usually including

NOREC, NGM, and LAG.

The program will then start the transforms with the input data on tape unit 1 and the output on tape unit 2. After the transforms have been performed on a particular time sequence, an ENDFILE will be written and the following information will be output:

IFILE=the number of the file of the transforms, with respect to the first set of transforms

IREC=the number of records output for that particular set of transforms. Since these are recorded on 1K records, IREC = number of transforms.

Upon completion of all of the transforms, control will return to the main program, which again requests:

COMMAND ME.

Nifty

I. Description

NIFTY is a self-contained, general-purpose program for handling tapes. It is accessable in two forms: as a stand-alone program or as part of an overlay package. Once NIFTY is in the computer, its operating proceedure is the same regardless of its status as a main program or a subroutine. NIFTY maintains a dialogue with the operator, asking for input parameters and dispensing information.

II. Operating Proceedure

The reader is refered to the operating instructions of the various overlay packages when calling NIFTY as an overlay is desired. To use the stand-alone version, the NIFTY DRIVER and its Metasymbol subroutines are compiled.

When the program is in the computer and execution is begun, NIFTY takes the initiative asking:

WHAT DO YOU WANT TO DO

The user then responds by asking for one or more of six options, which are listed below in order of priority:

A. FILES = 1

skip a given number of files

B. RECORDS = 1

skip a given number of records

C. DUMP = 1

dump a record on the line printer

D. COPY = 1

copy a record from one tape to another

E. WEOF = 1

write an end of file on the tape

F. TAPRWD = 1

rewind the tape

these instructions should be followed by:

c/r *

c/r

Program control will be transfered to the subroutine designed to execute the requested option. In each case the operator will be asked to specify various parameters.

When NIFTY is party of an overlay an additional option allowing return to the main overlay segment is available. It is the KILL option. By typing KILL = 1, control is returned to the calling program.

III. NIFTY Subroutines

At the start of each subroutine, a message will be printed on the XDS 9300 teletype console. It will state SPECIFY and will be followed by a list of parameters which must be defined in order that the subroutine execute properly. If a subroutine is being called repeatedly, its parameters will be remembered between calls; however, if a different subroutine call preceeds the recall of a subroutine, the user is advised to play it safe and respecify all

parameters.

A. FILES

This subroutine will space a magnetic tape forward or backward the number of files requested by the operator. An error will result if either the beginning or end of tape mark is encountered, so the user is required to keep track of which file is currently being accessed and should know the total number of files on the tape.

SPECIFY NFILE, DIR, UNIT

where

NFILE = number of files to be skipped

DIR = direction 0 - forward; 1 - backward

UNIT = tape unit 1 or 2

B. RECORDS

By choosing this option it is possible to position the tape forward or backward a given number of records. An error will occur if the end of tape or beginning of tape marks are encountered and the user must remember where in the current file the tape is positioned.

SPECIFY UNIT, NREC, DIR

where

UNIT = tape unit 1 or 2

NREC = number of records to be skipped

DIR = direction 0 - forward; 1 - backward

c. DUMP

One can dump a few records of either a binary or BCD tape onto the lineprinter using this option.

SPECIFY LREC, NREC, MODE, UNIT

where

LREC = length of records

NREC = number of records

MODE = 1 for binary; 0 for BCD

UNIT = tape unit 1 or 2

d. COPY

By using this option, one tape can be copied onto another either as is or with a conversion from binary to BCD or vice versa. This is a convienent way of merging two tapes.

SPECIFY LREC, NREC, MODE, INUNIT, OTUNIT, EOF

where

LREC = length of records

NREC = number of records

INMODE = 1 for binary; 0 for BCD on input tape

OTMODE = 1 for binary; 0 for BCD on output tape

INUNIT = input tape unit

OUTUNIT = output tape unit

EOF = end of file option for output tape.

1 to write an endfile after copying is completed

0 for no endfile mark

e. WRTEOF

This option allows the user to write an end of file on a tape with no other tape activity or with a subsequent rewind.

SPECIFY UNIT, RWOPTN

where

UNIT = tape unit 1 or 2

RWOPTN = option to rewind the tape after the EOF.

1 for rewind

0 for no rewind

f. TAPRWD

The specified tape unit is rewound.

SPECIFY UNIT

where

UNIT = tape unit 1 or 2

Each list of specifications should be followed by * c/r

Some of these subroutines will send messages to the user upon completion of the operation, then the program will return and reissue its original request:

WHAT DO YOU WANT TO DO

```
*      ESP - XFØRM CØNTRØL PRØGRAM
*
       INTEGER PTR,CSPI
       INTEGER XFCT,XCNT,SAMPTS
       CØMMØN IP,LINE,NGRP,NPIG,NSL,ITIME,LFTIME,IRESØ,LG(3),
      * IHARM1,IHARM2,IWIDE,NFRAM,NSHUT,INTL,INTS,INTSL,INTLØ,NPT,
      * LAG,MDLAY,IEØF,LFT,N1,KILL,ITAPE,NBC,INITL,ICARD,
      * MTAPE,ISWEEP,ISQRT,ISCL,IREP,CSPI,ISTUP(3),
      * LP(3),LGRP,ISCP,LSPEC,NREC,NCTR,IPTR,LPTR,LSD,IDISPY,
      * ISCAN,ISCAL,IFILE,IAB,JAB,IREWIND,STRT1,STRT2,STRT3,
      * HARM1,WINT,SINT,SLINT,WØINT,HARM2,SWINC,SWL,SWU,SINC,IFLAG,
      * PTR,ICTR,ISHT,NØREC,ISTAR,TF,ISWI,ISWU,ISWL,IØPTN,NP
      * ,KNIFTY,NØNØISE,XFCT,XCNT,LG10,LGNAT,IDATE(3),ISITE,LGCNT,
      * SAMPTS,ISFT
*
       NAMELIST KNIFTY,NØNØISE
*
*
5      CALL UPSET
       ØUTPUT(102) 'SETUP AGT FØR ESP'
       INPUT(101)
       ISTAR = 1
       IF(KNIFTY .EQ. 1) KNIFTY = 0; CALL NIFTY
10     CALL ESP
       IF(KNIFTY .EQ. 1) KNIFTY = 0; CALL NIFTY; GØ TØ 10
       IF(KILL .EQ.1) KILL = 0; ØUTPUT(102) 'STP'; INPUT(101)
       IF(CSPI .EQ. 1) GØ TØ 20
       CALL XFØRM
       GØ TØ 10
20     ØUTPUT(102) 'CIRCUS'
       GØ TØ 10
       END
```

```
        PAGE
A       EQU     5
B       EQU     4
*
*       FØRREC  BAKREC      SPACE THE TAPE EITHER FØRWARD ØR
*       BACKWARD I RECØRDS
*       CALLS       9SETUPN, R/IØPS
*       CALLED BY       MAIN PRØGRAM
*       CALL BAKREC(N,I)    N = UNIT, I = NØ.ØF RECØRDS
*
*
$BAKREC PZE     0
        LDA     BAKREC
        STA     FØRREC
        BRU     FØRREC+1
*
*
$FØRREC PZE     0
        BRM     9SETUPN
        PZE     2
FUNIT   PZE     0               ;UNIT
FNREC   PZE     0               ;NØ. ØF RECØRDS
        LDA     *FUNIT
        STA     FUNT
        BRM     ASGN
        PZE     1
FUNT    PZE     0
        LDA     ARFDT
        ADD     =03000000
        STA     FØCAL
        LDA     *FNREC
        SKU     =0
        BRU     RCEND
        LDB     BAKREC
        SKB     =077777         ;GØ BACKWARDS
        BRU     $+2
        CØPY    (-A,A)
        STA     TFDT+4
        BRM     R\IØPS
        PZE     1
FØCAL   PZE     0
        SKN     TFDT
        BRU     $+2
        BRU     $-2
RCEND   STZ     BAKREC
        BRR     FØRREC
        PAGE
*
*       BAKSCN  FØRSCN  SCANS FØRWARD ØR BACKWARD ØN A TAPE FØR A
*       KEYWØRD ØR AN END FILE MARK
*       CALLS       9SETUPN, R/IØPS, BCDCVT, ASGN
*       CALLED BY       MAIN PRØGRAM
*
*
```

```
*
$BAKSCN PZE     0
        LDA     BAKSCN
        STA     FØRSCN
        BRU     FØRSCN+1
*
*
$FØRSCN PZE     0
        BRM     9SETUPN
        PZE     2
SUNIT   PZE     0
SEØF    PZE     0
        STZ     CØUNT
        LDA     *SUNIT
        STA     SUNT
        BRM     ASGN             ;SEARCH SYMBØL TABLE
        PZE     1
SUNT    PZE     0
        LDA     =0600            ;600 = 4 CHARACTER/WØRD
        STA     MØDE             ;STØRE MØDE IN FDT
PLC1    LDA     =017170000       ;PUT EØF KEYWØRD IN FDT
        STA     TFDT+4
        LDA     *SEØF            ;GET NØ. ØF EØF'S
        SKU     =0
        BRU     FEND
        SUB     =1
        STA     CØUNT
PLC2    LDB     BAKSCN
        LDA     ARFDT
        ADD     =02000000
        SKB     =077777          ;SCAN BACKWARDS
        BRU     $+2              ;NØ
        ADD     =00100000
        STA     SCNCAL
DØIØ    BRM     RNIØPS
        PZE     1
SCNCAL  PZE     0
        SKN     TFDT
        BRU     $+2
        BRU     $-2              ;NØ
        LDA     TFDT
        SKU     =06000000        ;BEGIN ØR END TAPE
        BRU     FEND
        LDA     *SEØF
        SKU     =0
        BRU     CNTR
        LDA     TFDT
        SKE     =010000000
        BRU     DØIØ
CNTR    SKR     CØUNT
        BRU     DØIØ
        LDA     BAKSCN           ;WAS THERE BACKSCANNING
        SKU     =0
        BRU     FEND
        LDA     SUNIT
```

```
        STA     PLC3
        LDA     1
        STA     PLC4
        BRM     FØRREC          ;GØ FØRWARD 1 RECØRD TØ GET PAST THE EØF
        PZE     2
PLC3    PZE     0
PLC4    PZE     0
FEND    STZ     BAKSCN
        BRR     FØRSCN
*
*
CØUNT   PZE     0
        PAGE
*
*       BCDCVT     CØNVERTS A WØRD TØ BCD
*       CALLS     NØNE
*       CALLED BY      ASGN, FØRSCN, BAKSCN
*
*
$BCDCVT PZE     0
        BRM     9SETUPN
        PZE     1
WØRD    PZE     0
        STX     STØRE,1
        LDX     =0200000-4,1
        LDA     =060606060
        STA     NAMTAB
        STA     NAMTAB+1
CLØØP   LDB     WØRD
        ALSB    1
        CØPY    (0,A)
        DIV     =10
        CØPY    (A,B),(B,A)
        STB     WØRD
        LDB     MASK
        STS     NAMTAB
        LDA     NAMTAB
        CRSA     6
        STA     NAMTAB
        BRX     DLØØP,1
        BRU     ELØØP
DLØØP   LDA     WØRD
        SKE     =0
        BRU     CLØØP
ELØØP   LDX     STØRE,1
        BRR     BCDCVT
STØRE   PZE     0
MASK    PZE     077
        PAGE
*
*       ASGN      FINDS SYMBØL TABLE ADDRESS ØF TAPE UNIT
*       CALLS      R/RSTS
*      CALLED BY    ALL TAPE HANDLING SUBRØUTINES
*       WILL CAUSE AN ABØRT IF AN ADDRESS CØRRESPØNDING TØ THE  UNIT
*       IS NØT FØUND
```

```
*
*
*
$ASGN   PZE     0
        BRM     ØSETUPN
        PZE     1
TUNT    PZE     0
        LDA     TUNT
        STA     ASGN1
        BRM     BCDCVT
        PZE     1
ASGN1   PZE     0
ASGN2   BRM     R\RSTS
        PZE     1
        PZE     NAMTAB
        SKU     =0
        BRU     TERR
        STA     TFDT+5
        BRR     ASGN
TERR    LDA     NAMTAB
        STA     MSG+1
        BRM     R\ABRT
        PZE     1
        PZE     MSG
*
*
NAMTAB  TEXT    8,
        PZE     3
*
MSG     PZE     4
        TEXT    16,      NØT FØUND
*
*
*
ARFDT   PZE     TFDT
*
TFDT    PZE     0
        PZE     0
        PZE     0
MØDE    PZE     0
DIRECT  PZE     0
FCB     PZE     0
        PZE     0
*
        PAGE
*
*       BCDIN/ØUT   BININ/ØUT    READ ØR WRITE A TAPE IN EITHER BCD ØR
*       BINARY
*       CALLS      ASGN, ØSETUPN, R/IØPS
*       CALLED BY      MAIN PRØGRAM
*
$BINØUT PZE     0
        LDA     BINØUT
        STA     BCDØUT
        STA     BCDIN
```

```
        LDA     =01
        STA     BINFLG
        BRU     BCDIN+1
*
*
$BININ  PZE     0
        LDA     BININ
        STA     BCDIN
        LDA     =01
        STA     BINFLG
        BRU     BCDIN+1
*
*
$BCDOUT PZE     0
        LDA     BCDOUT
        STA     BCDIN
        BRU     BCDIN+1
*
*
$BCDIN  PZE     0
        BRM     9SETUPN
        PZE     4
BUNIT   PZE     0               ;TAPE UNIT
BBUF    PZE     0               ;BUFFER ADDRESS
BREC    PZE     0               ;RECORD LENGTH
BIND    PZE     0
        STZ     *BIND
        LDA     *BUNIT
        STA     BUNT
        BRM     ASGN
        PZE     1
BUNT    PZE     0
        LDA     =0600
        LDB     BINFLG
        SKB     =077777         ;IS FLAG SET - BINARY
        BRU     $+2
        ADD     =01000          ;YES
        STA     MODE
        STZ     BINFLG
        LDA     BBUF
        LDB     *BREC
        STD     TFDT+1
        LDA     ARFDT           ;FDT ADDRESS
        LDB     BCDOUT
        SKB     =077777         ;OUTPUT
        BRU     $+2             ;NO
        ADD     =04000000       ;YES
        STA     BCAL
        STZ     BCDOUT
        BRM     RNIOPS
        PZE     1
BCAL    PZE     0
        SKN     TFDT
        BRU     $+2
        BRU     $-2
```

```
        LDB     TFDT
        SKB     =016000000
        BRU     BFIN
        LDA     =01
        STA     *BIND
BFIN    STZ     BINFLG
        BRR     BCDIN
*
*
BINFLG  PZE     0
        PAGE
*
*       WEOF     WRITES AN END OF FILE WITH AN OPTION TO REWIND THE
*        TAPE AT THE USER'S REQUEST
*       CALLS     OSETUPN, R/IOPS, RWND
*       CALLED BY     MAIN PROGRAM
*       CALL WEOF(N,IR)      N=UNIT, IR=0 OR 1 - NO REWIND OR REWIND
*
*
$WEOF   PZE     0
        BRM     OSETUPN
        PZE     2
WUNIT   PZE     0
WFLAG   PZE     0
        LDA     *WUNIT
        STA     WUNT
        BRM     ASGN            ;SEARCH SYMBOL TABLE
        PZE     1
WUNT    PZE     0
        LDA     ARFDT           ;FDT ADDRESS
        ADD     =03100000       ;OP CODE FOR ENDFILE
        LDB     *WFLAG          ;REWIND FLAG
        SKB     =077777
        BRU     $+2
        ADD     =00200000
        STA     WECAL           ;STORE OP CODE + FDT ADDRESS
        BRM     RNIOPS
        PZE     1
WECAL   PZE     0
        SKN     TFDT
        BRU     $+2
        BRU     $-2
        BRR     WEOF
        PAGE
*
$RWND   PZE     0
        BRM     OSETUPN
        PZE     1
RUNIT   PZE     0
        LDA     *RUNIT
        STA     RUNT
        BRM     ASGN            ;GO SEARCH SYMBL TABLE
        PZE     1
RUNT    PZE     0
        LDA     ARFDT           ;FDT ADDRESS
```

```
         ADD      =03200000     ;ØP CØDE FØR REWIND
         STA      RWCAL         ;STØRE IN CALLING SEQUENCE
         BRM      R\IØPS
         PZE      1
RWCAL    PZE      0
         SKN      TEST
         BRU      $+2
         BRU      $-2
         BRR      RWND
*
*
REW      ØPD      03200000
WRIT     ØPD      04000000
$CLR     PZE      0
         STZ      REØFFLAG
         MPØ      CLR
         BRR      CLR
*
*        CALL WIRTE (IFILE,IBUF
*
$WRITE   PZE      0
         LDA      WRITE
         STA      READD
         BRU      READD+1
*
*        CALL READD (IFILE,IBUF,NWØRD)
*
$READD   PZE      0
         BRM      ØSETUPN
         PZE      3
IFILE    PZE      0
IBUF     PZE      0
NWØRD    PZE      0
         STX      SAVE,1
         LDA      *IFILE
         SUB      =10
         CØPY     (5,1)
         LDA      FILE,1
         STA      LØØK
         BRM      R\RSTS
         PZE      1
         PZE      LØØK
         SKU      R\ZERØ
         BRU      NØFILE
         CØPY     (5,1)
         LDA      0,1
         CØPY     (5,1)
         LDA      2,1
         STA      SECT
         LDA      IBUF
         LDB      *NWØRD
         STD      BUF
         LDA      READØP
         LDB      WRITE
         SKB      =077777
```

```
        BRU     $+2
        ADD     =04000000
        STZ     WRITE
        STA     IØØP
        BRM     R\IØPS
        PZE     1
IØØP    PZE     0
        LDX     =0100000,1
        SKN     FDT
        BRU     ERCK
        BRX     $-2,1
        LDA     011
        STA     $+1
        PZE     0
        NØP
ERCK    LDA     FDT
        SKA     ERRØR
        BRU     READER
        LDX     SAVE,1
        BRR     READD
*
READER  LDP     RER
        BRU     PRINT
RER     PZE     $+2
        PZE     5
        TEXT    16,DISK IØ ERRØR
        DATA    060605252
*
NØFILE  LDP     FER
        BRU     PRINT
FER     PZE     $+2
        PZE     5
        TEXT    16,FILE NØT FØUND
        DATA    060605252
*
PRINT   STD     ERBUF
        BRM     R\IØPS
        PZE     1
        WRIT    ERFDT
        SKN     ERFDT
        BRR     READD
        BRU     $-2
*
*
*
FDT     PZE     0
BUF     PZE     0
        PZE     0
        PZE     03600
SECT    PZE     0
        PZE     R\SYST
        PZE     0
*
FILE    TEXT    4,10
        TEXT    4,11
```

```
TEXT    4,12
TEXT    4,13
TEXT    4,14
TEXT    4,15
TEXT    4,16
TEXT    4,17
TEXT    4,18
TEXT    4,19
TEXT    4,20
TEXT    4,21
TEXT    4,22
TEXT    4,23
TEXT    4,24
TEXT    4,25
TEXT    4,26
TEXT    4,27
TEXT    4,28
TEXT    4,29
TEXT    4,30
TEXT    4,31
TEXT    4,32
TEXT    4,33
TEXT    4,34
TEXT    4,35
TEXT    4,36
TEXT    4,37
TEXT    4,38
TEXT    4,39
TEXT    4,40
TEXT    4,41
TEXT    4,42
TEXT    4,43
TEXT    4,44
TEXT    4,45
TEXT    4,46
TEXT    4,47
TEXT    4,48
TEXT    4,49
TEXT    4,50
TEXT    4,51
TEXT    4,52
TEXT    4,53
TEXT    4,54
TEXT    4,55
TEXT    4,56
TEXT    4,57
TEXT    4,58
TEXT    4,59
TEXT    4,60
TEXT    4,61
TEXT    4,62
TEXT    4,63
TEXT    4,64
TEXT    4,65
TEXT    4,66
```

```
        TEXT    4,67
        TEXT    4,68
        TEXT    4,69
*
LØØK    PZE     0
        TEXT    4,
        PZE     3
*
ERRØR   DATA    020000000
SAVE    PZE     0
READØP  PZE     FDT
ERFDT   PZE     0
ERBUF   PZE     0
        PZE     0
        PZE     02600
        PZE     0
        PZE     RNCØNS
        PZE     0
        END
```

```
      SUBRØUTINE UPSET
      INTEGER PTR,CSPI
      INTEGER XFCT,XCNT,SAMPTS
      CØMMØN IP,LINE,NGRP,NPIG,NSL,ITIME,LFTIME,IRESØ,LG(3),
     * IHARM1,IHARM2,IWIDE,NFRAM,NSHUT,INTL,INTS,INTSL,INTLØ,NPT,
     * LAG,MDLAY,IEØF,LFT,N1,KILL,ITAPE,NBC,INITL,ICARD,
     * MTAPE,ISWEEP,ISQRT,ISCL,IREP,CSPI,ISTUP(3),
     * LP(3),LGRP,ISCP,LSPEC,NREC,NCTR,IPTR,LPTR,LSD,IDISPY,
     * ISCAN,ISCAL,IFILE,IAB,JAB,IREWIND,STRT1,STRT2,STRT3,
     * HARM1,WINT,SINT,SLINT,WØINT,HARM2,SWINC,SWL,SWU,SINC,IFLAG,
     * PTR,ICTR,ISHT,NØREC,ISTAR,TF,ISWI,ISWU,ISWL,IØPTN,NP
     * ,KNIFTY,NØNØISE,XFCT,XCNT,LG10,LGNAT,IDATE(3),ISITE,LGCNT,
     * SAMPTS,ISFG
      NØNØISE = 0
      LINE = 10
      NGRP=NSL=LAG=N1=ITAPE=1
      NPT = 150
      ISFG = 512
      STRT1 = 3.5
      STRT2 = 0.
      STRT3 = 0.
      HARM1 = HARM2 = 0.
      LFT = 8192
      WINT = 0.5
      SINT=SLINT=WØINT=1.0
      ISKIP = IFLAG = 0
      NBC = 5
      NSKIP = LSD = 0
      IWIDE = 10
      NP = 20
      CSPI = KILL = ISWEEP = KNIFTY = 0
      SWL = 0.
      SWU = 150.
      SWINC = .5
      ISCL = 16
      RETURN
      END
```

```
      SUBRØUTINE ESP
*     ESP
*
*     THIS IS A MØDIFICATIØN ØF THE BASIC ESP SØ THAT THE INPUT
*     TRANSFØRMS ARE DØNE ØN LINE
*
*
*
      INTEGER DTFILE,XFILE,CSPI,PTR,IAVFILE,KJREC,LREC,KREC
      INTEGER XFCT,XCNT,SAMPTS
      DIMENSIØN IDUM(20),IW(3),NULG(3),IKEEP(7)
      DIMENSIØN LKDAT(1500),IVERB(300)
      DIMENSIØN LDATA(150,10),IBUF(4096),IAV(4096)
      CØMMØN IP,LINE,NGRP,NPIG,NSL,ITIME,LFTIME,IRESØ,LG(3),
     * IHARM1,IHARM2,IWIDE,NFRAM,NSHUT,INTL,INTS,INTSL,INTLØ,NPT,
     * LAG,MDLAY,IEØF,LFT,N1,KILL,ITAPE,NBC,INITL,ICARD,
     * MTAPE,ISWEEP,ISQRT,ISCL,IREP,CSPI,ISTUP(3),
     * LP(3),LGRP,ISCP,LSPEC,NREC,NCTR,IPTR,LPTR,LSD,IDISPY,
     * ISCAN,ISCAL,IFILE,IAB,JAB,IREWIND,STRT1,STRT2,STRT3,
     * HARM1,WINT,SINT,SLINT,WØINT,HARM2,SWINC,SWL,SWU,SINC,IFLAG,
     * PTR,ICTR,ISHT,NØREC,ISTAR,TF,ISWI,ISWU,ISWL,ISPTN,NP
     * ,KNIFTY,NØNØISE,XFCT,XCNT,LG10,LGNAT,IDATE(3),ISITE,LGCNT,
     * SAMPTS,ISFG
*
      EQUIVALENCE(LKDAT,LDATA)
      EQUIVALENCE(IDATE,IKEEP)
      EQUIVALENCE(IVERB,IBUF)
*
      NAMELIST LINE,NGRP,NPT,NSL,IT,LAG,ISFG,STRT1,STRT2,STRT3,HARM1,
     * WINT,SINT,SLINT,WØINT,NFRAM,NSHUT,MDLAY,IEØF,IDATE,SAMPTS,
     * ISITE,LGCNT,
     C  HARM2,LFT,N1,LREC,ITAPE,NBC,INITL,ICARD,NSKIP,IWIDE,MTAPE
      NAMELIST SWINC,ISWEEP,SWL,SWU,ISQRT,SINC,ISCL,ISKIP,IREP
      NAMELIST IREWIND,CSPI,LSD,KNIFTY,NØNØISE,LG10,LGNAT
      DATA DTFILE/45/,IAVFILE/46/,KJREC/4096/,XFILE/10/,LREC/1024/,
     *  KREC/2048/,IVTAPE/2/
C
      ISW(I)=LAND(IW(1),LLS(1,24-I))
      JSW(I)=LAND(IW(2),LLS(1,24-I))
C
C
C  KEYBØARD INPUT
C
      GØ TØ (10,20,120) ISTAR
10    INITL=1
      ØUTPUT(102) 'DATA INPUT'
      INPUT(101)
20    IF(KNIFTY .EQ. 1) ISTAR = 2; RETURN
      IF(ICARD .EQ. 1) INPUT(5)
      ICARD=0
      IF(INITL.EQ.0) GØ TØ 100
C
C  INITIALIZATIØN
C
```

```
30     CALL PRESET
C
C
C  INITIATE AGT DISPLAY
C
       CALL CØRMØV(IP,NP,IDUM)
       CALL SEND(3,IDUM,NP)
C
C  N1 INTEGRATIØN
C
       XFCT = 0
100    DØ 110 I=1,LSPEC
110    IAV(I)=0
C
       DØ 150 IAB = 1,N1
       DØ 150 JAB = 1,NREC
       ISTAR = 3
       IF(XFCT .NE. 0) GØ TØ 120
       CALL DEATH
       RETURN
120    CALL BIRTH
129    IF(IFLAG .EQ. 777) GØ TØ 300
130    NEØF=0
       N = (JAB -1)*LREC
       DØ 140 K=1,LREC
140    IAV(N+K)=IAV(N+K)+IBUF(K)/N1
150    CØNTINUE
C
       NFT=NFT+N1
C
C  UPDATE BØX CAR
C
       IFILE = IPTR + 30
       CALL WRITE(IFILE,IAV,LSPEC)
       IPTR = MØD(IPTR+1,NBC)
C
C  SIDE LINE DISPLAY ØPTIØN
C
       IF(LSD.EQ.0) GØ TØ 160
       DØ 155 I=1,NGRP
       M=LP(I)
       N=(I-1)*NPIG
       DØ 155 J=1,NPIG
       ITEMP=IAV(M+J)/ISCL
       CALL ADJUST
155    IAV(N+J)=ITEMP
       CALL SEND(5,IAV,NPT)
C
160    NCTR=NCTR+1
       IF(NCTR.LT.NBC)GØ TØ 100
C
C  BØX CAR AVERAGING
C
200    DØ 205 I=1,LSPEC
205    IAV(I)=0
```

```
      IF(ISWEEP.EQ.0)GØ TØ 220
C
      DØ 210 I=1,NBC
      IFILE = I + 29
      CALL READD(IFILE,IBUF,LSPEC)
C
      DØ 210 J=1,LSPEC
210   IAV(J)=IAV(J)+IBUF(J)/NBC
C
      IFILE = LPTR + 35
      CALL WRITE(IFILE,IAV,LSPEC)
      GØ TØ 240
C
220   DØ 230 I=1,NBC
      IFILE = I + 29
      CALL READD(IFILE,IBUF,LSPEC)
      DØ 230 J=1,NGRP
      N=LP(J)
      DØ 230 K=1,NPIG
      M=(J-1)*NPIG
230   IAV(M+K)=IAV(M+K)+IBUF(N+K)/NBC
C
C  UPDATE DISPLAY DATA
C
240   DØ 250 I=1,NGRP
      N=(I-1)*NPIG
      M=LP(I)
C
      DØ 250 J=1,NPIG
      ITEMP=IAV(M+J)/ISCL
      CALL ADJUST
250   LDATA(N+J,LPTR+1)=ITEMP
      CALL SEND(6,LDATA(1,LPTR+1),NPT)
      LPTR = MØD(LPTR+1,LINE)
C
C
C
260   CALL CØRMØV(ISTUP,3,IW)
      CALL SEND(1,IW,1)
      IW(2)=LXØR(IW(1),IW(3))
      IW(3)=IW(1)
      CALL CØRMØV(IW,3,ISTUP)
      IF(ISW(1).NE.0)GØ TØ 280
      IF(JSW(2).NE.0)LSD=MØD(LSD+1,2);CALL SEND(4,0,0)
      IF(ISW(3).NE.0)CALL SEND(7,0,0)
      IF(JSW(4).NE.0)IDISPY=MØD(IDISPY+1,2)
      IF(ISW(5).NE.0)CALL SEND(16B,0,0)
      IF(JSW(6).NE.0)CALL SEND(15B,0,0)
      IF(JSW(7).NE.0)CALL SEND(14B,0,0)
      ISCAL=0
      IF(ISW(8).NE.0)ISCAL=1;CALL SCALE
      ISCAN=0
      IF(ISW(9).NE.0)ISCAN=1;CALL SCAN
      IF(ISW(11).NE.0)CALL SCAN
      IF(ISW(13) .NE. 0) CALL VERSA
```

```
      IF(ISW(18).NE.0)MDLAY=MDLAY;CALL DELAY;CALL SEND(11B,0,0)
      IF(ISW(19).NE. 0) CALL INPUT;CALL SETI;CALL SEND(3,IDUM,NP)
      IF(NGRP.EQ.LGRP)GØ TØ 270
      CALL REGRP
      LGRP=NGRP
270   IHØLD=ISCAN+ISCAL+IDISPY
      IF(IHØLD.NE.0)GØ TØ 260
      IF(NEØF.NE.0)GØ TØ 260
      IF(SENSESWITCH 6)280,100
280   CALL SEND(0,0,0)
      IF(ISW(14) .NE. 0) CALL WEØF(IVTAPE,1)
      CALL INPUT
      CALL SETI
      IF(IREWIND .EQ. 0) CALL RWND(ITAPE)
      IF(IREWIND .EQ. 1) CALL BAKREC(ITAPE,NØREC); CALL FØRSCN(ITAPE,1)
*     GET PAST END ØF FILE MARK SEPARATING TIME SEQUENCES
*     GET PAST END ØF FILE MARK SEPARATING TIME SEQUENCES
      IF(IREP.EQ.1)IREP=0;GØ TØ 30
      IF(IEØF.NE.0)ICARD=1
      INITL=1
      IF(ICARD.EQ.1)GØ TØ 20
      KILL = 1
      ISTAR = 1
      RETURN
300   NEØF=NEØF+1
      CALL CLREØF
      GØ TØ 260
C
C
C
      SUBRØUTINE PRESET
      CALL BININ(ITAPE,IBUF,LREC,IND)
      NØREC = IBUF(1)
      DØ 31 I = 1,7
31    IKEEP(I) = IBUF(2+I)
      LGCNT = 0
30    INITL=0
      LGRP=NGRP
      ISCP=ISCL
      CALL SETI
      LSPEC=LFT/2
      XCNT = LREC/LSPEC
      NREC=LSPEC/LREC
      IF(NREC .LE. 0) NREC = 1
      ITIME = IBUF(12)+60*(IBUF(11)+60*IBUF(10))
      NCTR=IPTR=LPTR=0
      LSD=0
      IDISPY=ISCAN=ISCAL=0
      IW(1)=IW(2)=IW(3)=0
      DØ 33 I=1,LSPEC
33    IBUF(I)=0
      DØ 34 I=1,LINE
      IFILE = I + 34
34    CALL WRITE(IFILE,IBUF,LSPEC)
      DØ 35 I=1,LINE
```

```
      DØ 35 J=1,NPT
35    LDATA(J,I)=0
      PTR = 1
      IFLAG = 0
      ISHT = 0
      RETURN
*
*
*
      SUBRØUTINE BIRTH
      IF(XFCT .NE. 0) GØ TØ 25
      CALL READD(IAVFILE,IAV,KJREC)
      CALL READD(DTFILE,IBUF,KJREC)
      DØ 20 IV = 1,1500
20    LKDAT(IV) = IBUF(500+IV)
25    IF(CSPI .EQ. 0) GØ TØ 30
      XFILE = 47
      CALL READD(XFILE,IBUF,KJREC)
      LGCNT = LGCNT + 1
      RETURN
30    CALL READD(XFILE,IBUF,KREC)
      LGCNT = LGCNT + 1
      MA = XFCT * LSPEC
      DØ 40 IV = 1,LSPEC
40    IBUF(IV) = IBUF(MA+IV)
      XFCT = MØD(XFCT+1,XCNT)
      IF(LGCNT .GE. (SAMPTS-LFT)/LAG) IFLAG = 777
      RETURN
*
*
*
      SUBRØUTINE DEATH
      DØ 10 IV = 1,1500
10    IBUF(500+IV) = LKDAT(IV)
      CALL WRITE(DTFILE,IBUF,KJREC)
      CALL WRITE(IAVFILE,IAV,KJREC)
      RETURN
*
*
*
*
*
*
*
      SUBRØUTINE SCAN
      IF(ISWEEP.EQ.0)RETURN
      ISGN=0
      IF(ISW(10).NE.0)ISGN=-1
      DØ 10 I=1,NGRP
      LP(I)=LP(I)+ISIGN(ISWI,ISGN)
      IF(I.NE.1)GØ TØ 10
      IF(LP(I).LT.ISWL)LP(I)=LP(I)-ISIGN(ISWI,ISGN);RETURN
      IF(LP(I).GT.ISWU)LP(I)=LP(I)-ISIGN(ISWI,ISGN);RETURN
10    CØNTINUE
      DØ 20 I=1,NGRP
```

```
20    LG(I)=LG(I)+ISIGN(ISWI,ISGN)
      IF(NGRP.EQ.1)LP(3)=LP(2)=LP(1);LG(3)=LG(2)=LG(1)
      CALL RECØN
      CALL CØRMØV(LG,3,NULG)
      CALL SEND(13B,NULG,3)
      CALL CØRMØV(NULG,3,LG)
      IF(LSD.NE.0)CALL SIDE
      RETURN
C
C
C
      SUBRØUTINE RECØN
      N=LPTR-1
      IF(N.LT.0)N=LINE-1
      DØ 20 I=1,LINE
      IFILE = N + 35
      CALL READD(IFILE,IBUF,LSPEC)
      DØ 15 J=1,NGRP
      L=(J-1)*NPIG
      M=LP(J)
      DØ 15 K=1,NPIG
      ITEMP=IBUF(M+K)/ISCL
      CALL ADJUST
15    LDATA(L+K,N+1)=ITEMP
      CALL SEND(12B,LDATA(1,N+1),NPT)
      N=N-1
      IF(N.LT.0)N=LINE-1
20    CØNTINUE
      RETURN
C
C
C
      SUBRØUTINE SIDE
      N=IPTR-1
      IF(N.LT.0)N=NBC-1
      IFILE = N + 30
      CALL READD(IFILE,IBUF,LSPEC)
      DØ 25 I=1,NGRP
      L=(I-1)*NPIG
      M=LP(I)
      DØ 25 J=1,NPIG
      ITEMP=IBUF(M+J)/ISCL
      CALL ADJUST
25    IAV(L+J)=ITEMP
      CALL SEND(5,IAV,NPT)
      RETURN
C
C
C
      SUBRØUTINE REGRP
      CALL SEND(17B,0,0)
      CALL RECØN
      IF(LSD.NE.0)CALL SIDE
      RETURN
C
```

```
C
C
      SUBRØUTINE SETI
      TF = LFT/ISFQ
      IRESØ=TF
      NFTIME = LAG/ISFQ
      LFTIME=NFTIME*N1
      NPIG=NPT/NGRP
      LP(1)=STRT1*TF-NPIG/2
      LP(2)=(STRT2+HARM1*STRT1)*TF-NPIG/2
      LP(3)=(STRT3+HARM2*STRT1)*TF-NPIG/2
      DØ 10 I = 1,3
      IF(LP(I) .LE. 0) LP(I) = 1
10    LG(I) = LP(I) - (I-1)*NPIG
      IF(NGRP.EQ.1)LP(3)=LP(2)=LP(1);LG(3)=LG(2)=LG(1)
      IHARM1=2**9*HARM1
      IHARM2=2**9*HARM2
      IP=SINC*TF
      ISWI=SWINC*TF
      ISWU=SWU*TF
      ISWL=SWL*TF
      INTL=WINT*8192
      INTS=SINT*8192
      INTSL=SLINT*8192
      INTLØ=WØINT*8192
      IF(ISCL.EQ.ISCP)GØ TØ 30
      CALL RECØN
      IF(LSD.NE.0)CALL SIDE
      ISCP=ISCL
30    CALL CØRMØV(IP,NP,IDUM)
      RETURN
*
C
C
      SUBRØUTINE SCALE
      CALL SEND(10B,IØPTN,1)
      IF(IØPTN.LT.0)RETURN
      N=LPTR-1
      IF(N.LT.0)N=LINE-1
      DØ 10 I=1,LINE
      CALL SEND(10B,LDATA(1,N+1),NPT)
      N=N-1
      IF(N.LT.0) N=LINE-1
10    CØNTINUE
      IF(LSD.NE.0)CALL SIDE
      RETURN
*
*
*     SUBRØUTINE TØ DUMP DISPLAY ØN TAPE
*
      SUBRØUTINE VERSA
*
*     DESCRIPTIØN ØF HEADER RECØRD
*     1     NUMBER ØF PØINTS
*     2     NUMBER ØF LINES
```

```
*       3     X INCREMENT
*       4     Y INCREMENT
*       5     CURRENT LINE PØINTER
*       6     NUMBER ØF SPØTLIGHTS
*       7     CENTER ØF SPØTLIGHT 1
*       8     CENTER ØF SPØTLIGHT 2
*       9     CENTER ØF SPØTLIGHT 3
*       10    TIME HØURS
*       11    TIME MINUTES
*       12    TIME SECØNDS
*       13    FFT LENGTH
*       14    FFT LAG
*       15    SAMPLING RATE
*       16    SITE IDENTIFICATIØN
*       17    SITE IDENTIFICATIØN
*       18    SITE IDENTIFICATIØN
*       19    LEAD PØINT
*       20    SCALE
*       21    MØNTH
*       22    DAY
*       23    YEAR
*
        DØ 10 IV = 1,300
10      IVERB(IV) = 0
        CALL SEND(20B,IVERB,NPT*2)
        IF(ISW(15) .NE. 0) IVERB(6) = -1
*
*       FUNCTIØN SWITCH 15  -  NØ SPØTLIGHT FØR HARDCØPY ØUTPUT
*
        IVERB(12) = ITIME + (LGCNT*LAG)/ISFQ
        IVERB(10) = IVERB(12) / 3600
        IVERB(11) = (IVERB(12) - IVERB(10)*3600)/60
        IVERB(12) = IVERB(12) - 60*(IVERB(11) + 60*IVERB(10))
        IVERB(13) = LFT
        IVERB(14) = LAG
        IVERB(15) = ISFQ
        CALL IDFIX(ISITE,JSITE)
        IVERB(16) = JSITE
        IVERB(17) = IVERB(18) = 0
        IVERB(19) = LP(1)
        IVERB(20) = ISCL
        IVERB(21) = IDATE(1)
        IVERB(22) = IDATE(2)
        IVERB(23) = IDATE(3)
        CALL BINØUT(IVTAPE,IVERB,NPT*2,IND)
        DØ 40 IV = 1,LINE
        CALL SEND(20B,IVERB,NPT*2)
        CALL BINØUT(IVTAPE,IVERB,NPT*2,IND)
40      CØNTINUE
        RETURN
*
*
*
        SUBRØUTINE ADJUST
*
```

```
      IF(ISQRT .NE. 0) ITEMP=ITEMP**2;IF(ITEMP.LT.0) ITEMP=2**14-1      044
      IF(ITEMP .EQ. 0) ITEMP = 1                                         044
      IF(LG10 .NE. 0) ITEMP = 1000*(ALOG10(FLOAT(ITEMP)))                044
      IF(LGNAT .NE. 0) ITEMP = 1000*(ALOG(FLOAT(ITEMP)))                 044
      IF(ITEMP .LT. -2**14-1) ITEMP = -2**14-1                           044
      IF(ITEMP .GT. 2**14-1) ITEMP = 2**14-1                             044
      RETURN                                                             044
      END                                                                044
```

```
$IDFIX PZE    0
       BRM    9SETUPN
       PZE    2
SITE   PZE    0
SIT2   PZE    0
       LDA    *SITE
       LRSA    014
       STA    *SIT2
       BRR    IDFIX
       END
```

```
$CØRMØV PZE     0
        BRM     9SETUPN
        PZE     3
CIP     PZE     0
CNP     PZE     0
CIDUM   PZE     0
        STZ     CTR
LØØP    LDA     *CIP
        STA     *CIDUM
        LDA     CIP
        ADD     =01
        STA     CIP
        LDA     CIDUM
        ADD     =01
        STA     CIDUM
        LDA     CTR
        ADD     =01
        STA     CTR
        SKE     *CNP
        BRU     LØØP
        BRR     CØRMØV
CTR     PZE     0
        END
```

```
*
*
*
$CLRE8F PZE      0
        STZ      8E8FFLAG
        MP8      CLRE8F
       BRR       CLRE8F
*
*
*
*  SUBR8UTINE T8 SEND MESSAGR T8 AGT
*
$SEND   PZE      0
        BRM      9SETUPN
        PZE      3
NC8DE   PZE      0
NBUF    PZE      0
NWD     PZE      0
        LDA      *NC8DE          GET C8DE
        LLSA     15              PACK BUFFER ADDRESS
        STA      TEMP
        LDA      NBUF
        ETR      =077777
        ADD      TEMP
        LDB      *NWD            GET W8RD C8UNT
        LLSB     15
        STD      SW9             SEND MESSAGE
        E8M      032020          SEND INTERRUPT
        SKN      SW9             WAIT F8R ACCESS
        BRU      $-1
        BRR      SEND
TEMP    PZE      0
ACCESS  DATA     040000000
SWI     EGU      077774
SW9     EGU      077776
*
*  SUBR8UTINE F8R GRAPHIC INPUT
*
$INPUT  PZE      0
        LDA      INPADR          GET 9INPUT BUFFER
        ADD      BUF
        STA      IBUF
        LDA      INPADR          GET PATCH ADDRESS
        ADD      READ
        STA      PATCH
        LDA      BRM             PATCH 9INPUT T8 RECEIVE CHARACTERS
        XMA      *PATCH
        STA      BRM
INPADR  BRM      9INPUT          INPUT STRING
        LDA      BRM             RESTORE PATCH
        XMA      *PATCH
        STA      BRM
        MP8      INPUT
        BRR      INPUT
```

```
*
BRM      BRM      INP
INP      PZE      0
         BRM      SEND
         PZE      3
         PZE      *2
IBUF     PZE      0
         PZE      *5
         MPB      INP
         BRR      INP
*
*
BUF      DATA     0773
READ     DATA     0563
PATCH    PZE      0
         END
```

```
*     THIS PROGRAM FEEDS TRANSFORMS WITH A MAXIMUM LENGTH OF 1024
*     POINTS TO THE CALLING PROGRAM.  IT IS DESIGNED FOR ON-LINE
*     DISPLAYS, THE TRANSFORMS ARE NOT SAVED.
*
*
*
*
      SUBROUTINE XFORM
*
      INTEGER RECNTR
      INTEGER SVFILE,XFILE,DTFILE,PTR,COSFILE,CSPI,KREC,LREC
      INTEGER XFCT,XCNT,SAMPTS
      REAL PI
*
      COMMON IP,LINE,NGRP,NPIG,NSL,ITIME,LFTIME,IRESO,LG(3),
     * IHARM1,IHARM2,IWIDE,NFRAM,NSHUT,INTL,INTS,INTSL,INTLO,NPT,
     * LAG,MDLAY,IEOF,LFT,N1,KILL,ITAPE,NBC,INITL,ICARD,
     * MTAPE,ISWEEP,ISQRT,ISCL,IREP,CSPI,ISTUP(3),
     * LP(3),LGRP,ISCP,LSPEC,NREC,NCTR,IPTR,LPTR,LSD,IDISPY,
     * ISCAN,ISCAL,IFILE,IAB,JAB,IREWIND,STRT1,STRT2,STRT3,
     * HARM1,WINT,SINT,SLINT,WOINT,HARM2,SWINC,SWL,SWU,SINC,IFLAG,
     * PTR,ICTR,ISHT,NOREC,ISTAR,TF,ISWI,ISWU,ISWL,IOPTN,NP
     * ,KNIFTY,NONOISE,XFCT,XCNT,LG10,LGNAT,IDATE(3),ISITE,LGCNT,
     * SAMPTS,ISFQ
      DIMENSION NBUF(1024)
*
      DIMENSION IBUF(2048), KBUF(1024),WTAB(1024), FBUF(2,1024)
*
      DATA SVFILE/20/,PI/3.1415926535/,COSFILE/21/,XFILE/10/,KREC/2048/
     * ,LREC/1024/,NOSFILE/11/
*
*
*
      SF = 2.0**23
      IF(IFLAG .EQ. 1) GO TO 15
*
*     TRANSFER PARAMETER INFORMATION IN FILE 10 TO XFORM
*
*
*     NOREC IS THE NUMBER OF 1024 RECORDS OF SEISMIC DATA
*     NFT IS THE LENGTH OF THE TRANSFORM, IN POINTS
*     LAG IS THE SEPARATION, IN POINTS, BETWEEN TRANSFORMS
*     IPUT IS 1 FOR DRUM INPUT; 0 FOR TAPE INPUT
*     PTR INITIALLY 1, INDICATED WHICH HALF OF DRUM RECORD SHOULD BE
*       PUT INTO THE PRE-TRANSFORM BUFFER
*     IFLAG INDICATES WHETHER THE INITIAL RECORD HAS BEEN READ IN IF 1,
*       IF 777 INDICATES END OF FILE AND/OR END OF SEISMIC RECORD
*     ISHT KEEPS TRACK OF THE LEAD POINT OF THE TRANSFORM WITHIN THE
*     CURRENT SEISMIC RECORD
*     IFILE IS THE FILE OF THE INPUT DATA IF THE DRUM IS BEING USED
*
*
*     COMPUTE THE COSINE TABLE
*
```

```
      THETA = 0
      DTHETA = 2*PI/LFT
      DØ 20 I = 1,LFT
      WTAB(I) = (1-CØS(THETA))/2.0
   20 THETA = THETA + DTHETA
      CALL WRITE(CØSFILE,WTAB,LFT*2)
      DØ 25 I = 1,1024
25    KBUF(I) = 0
      CALL WRITE(NØSFILE,KBUF,LREC)
*
*
15    CALL READD(CØSFILE,WTAB,LFT*2)
      LAST = 0
      IREC = 0
      NXSHT = LREC/LAG
      NXREC = LFT/LREC
      NTX = LREC/(LFT/2)
      IF(NXREC .LT. 1) NXREC = 1
*
*
*     READ IN DATA
*
      IF((IFLAG .EQ. 0) .AND. (NØNØISE .NE. 0))GØ TØ 180
      IF(IFLAG .EQ. 1) GØ TØ 45
28    DØ 30 I = 1,NXREC + 1
      L = (I-1)*LREC + 1
      CALL BININ(1,IBUF(L),LREC,IND)
   30 CØNTINUE
      CALL WRITE(SVFILE,IBUF,KREC)
   45 CALL READD(SVFILE,IBUF,KREC)
*
*     PREPARE PRE-TRANSFØRM BUFFER, TØ TØ TRANSFØRM
*
      DØ 48 I = 1,LREC
48    KBUF(I) = 0
      DØ 150 N = 1,NTX
   50 IRP = LAG*ISHT
      DØ 60 I = 1,LFT
      FBUF(1,I) = IBUF(IRP + I)*WTAB(I)/2.0**23
   60 FBUF(2,I) = 0.0
      CALL FØUR2(FBUF,LFT,1,-1)
      CALL READD(NØSFILE,NBUF,LREC)
      LA = (N-1)*LFT/2
      DØ 80 I = 1,LFT/2
      KBUF(LA+I) = (SQRT(FBUF(1,I)**2 + FBUF(2,I)**2)*SF)- NBUF(I)
      IF(KBUF(LA+I) .LT. 0) KBUF(LA+I) = 0
80    CØNTINUE
*
      IF(LGCNT + N .GE. (SAMPTS-LFT)/LAG) GØ TØ 170
*     TAKE CARE ØF BØØKKEEPING
*
      ISHT = MØD(ISHT+1,NXSHT)
      IF(ISHT .NE. 0) GØ TØ 150
*
*     DØ NØT NEED MØRE DATA YET
```

```
*
      DØ 90 I = 1,LREC
   90 IBUF(I) = IBUF(I + LREC)
      CALL BININ(1,IBUF(LREC+1),LREC,IND)
*
*     STØRE PRE-TRANSFØRM BUFFER
*
      CALL WRITE(SVFILE,IBUF,KREC)
150   CØNTINUE
151   IFLAG = 1
      GØ TØ 170
*
*     ALL INPUT DATA HAS BEEN EXHAUSTED
*
170   CALL WRITE(XFILE,KBUF,LREC)
      RETURN
*
*
*
180   RECNTR = 2
      LA = 0
*     IF NØNØISE IS SET EQUAL TØ 1000, THE PRØGRAM DEFAULTS TØ THE
*     CASE IN WHICH THE AVERAGE NØISE IS FØUND FRØM THE ENTIRE SET ØF
*     TRANSFØRMS
      IF(NØNØISE .EQ. 1000) NØNØISE = (SAMPTS-LFT)/LAG
      DØ 181 I = 1,NXREC + 1
      L = (I-1)*LREC + 1
181   CALL BININ(1,IBUF(L),LREC,IND)
      CALL WRITE(SVFILE,IBUF,KREC)
      DØ 182 I = 1,LREC
182   KBUF(I) = 0
183   IRP = LAG*ISHT
      DØ 184 I = 1,LFT
      FBUF(1,I) = IBUF(IRP+I)*WTAB(I)/2.0**23
184   FBUF(2,I)=0.0
      CALL FØUR2(FBUF,LFT,1,-1)
      DØ 185 I = 1,LFT/2
185   KBUF(I) =(SQRT(FBUF(1,I)**2+FBUF(2,I)**2)*SF/NØNØISE)+ KBUF(I)
      LA = LA + 1
      IF(LA .EQ. NØNØISE) GØ TØ 187
      ISHT = MØD(ISHT+1,NXSHT)
      IF(ISHT .NE. 0) GØ TØ 183
      IF(RECNTR .EQ. NØREC) GØ TØ 187
      DØ 186 I = 1,LREC
186   IBUF(I) = IBUF(I+LREC)
      CALL BININ(1,IBUF(LREC+1),LREC,IND)
      RECNTR = RECNTR + 1
      GØ TØ 183
187   CALL BAKREC(ITAPE,RECNTR)
      CALL WRITE(NØSFILE,KBUF,LREC)
      ISHT = 0
      GØ TØ 28
*
*
      END
```

```
      SUBRØUTINE NIFTY
*
*     NIFTY DRIVER
*
      DIMENSIØN IBUF(8192)
      INTEGER INUNIT,ØTUNIT, EØF, INMØDE, ØUTMØDE
      INTEGER WRTEØF,TAPRWD,FINISH, FILES, RECØRDS, DUMP, NFILE, DIR,
     *        UNIT, MØDE, NREC, RWØPTN, LREC
      NAMELIST WRTEØF,TAPRWD, FINISH,FILES,RECØRDS,DUMP,NFILE,DIR,
     *         UNIT, MØDE, NREC, RWØPTN, LREC
      NAMELIST KILL, CØPY
      NAMELIST INUNIT, ØTUNIT, EØF
      NAMELIST INMØDE, ØUTMØDE
*
      DATA KILL/0/
*
   10 WRTEØF = TAPRWD = FINISH = FILES = RECØRDS = DUMP = 0
      CØPY = 0
      ØUTPUT(102) 'REQUEST'
       INPUT(101)
      IF(KILL .NE. 0) RETURN
      IF(FILES .NE. 0) CALL FILSKP
      IF(RECØRDS .NE. 0) CALL RECSKP
      IF(DUMP .NE. 0) CALL SDUMP
      IF(CØPY .NE. 0) CALL TCØPY
      IF(WRTEØF .NE. 0) GØ TØ 30
   20 IF(TAPRWD .NE. 0) GØ TØ 40
      IF((FILES .EQ. 0) .AND. (RECØRDS .EQ. 0) .AND. (DUMP .EQ. 0)
     * .AND. (WRTEØF .EQ. 0) .AND. (TAPRWD .EQ. 0) .AND. (CØPY .EQ. 0))
     * ØUTPUT(102) 'WAKE UP SLEEPY '
      GØ TØ 10
*
30    ØUTPUT(102) 'SPECIFY UNIT,RWØPTN'
      INPUT(101)
      CALL WEØF(UNIT,RWØPTN)
      GØ TØ 20
   40 ØUTPUT(102) 'SPECIFY UNIT'
      INPUT(101)
      CALL RWND(UNIT)
      GØ TØ 10
*
*     SKIP A CERTAIN NUMBER ØF FILES ØN A TAPE
*     CAUTIØN -  DØ NØT TRY TØ SKIP PAST THE BEGINNING ØR END ØF TAPE
*     MARKS.  WHEN IN DØUBT REWIND
*
      SUBRØUTINE FILSKP
      ØUTPUT(102) 'SPECIFY NFILE, DIR, UNIT'
      INPUT(101)
      IF(DIR .NE. 0) CALL BAKSCN(UNIT,NFILE); GØ TØ 10
      CALL FØRSCN(UNIT,NFILE)
10    ØUTPUT(102) 'DESIRED FILE'
      RETURN
*
*     SKIP A CERTAIN NUMBER ØF RECØRDS ØN A TAPE
```

```
*     CAUTION  -  DO NOT TRY TO SKIP PAST THE BEGINNING OR END OF TAPE
*     MARKS.   WHEN IN DOUBT, REWIND
*
      SUBROUTINE RECSKP
      OUTPUT(102) 'SPECIFY UNIT, NREC, DIR'
      INPUT(101)
      IF(DIR .NE. 0) CALL BAKREC(UNIT,NREC); GO TO 10
      CALL FORREC(UNIT,NREC)
10    OUTPUT(102) 'DESIRED RECORD'
      RETURN
*
*     READ IN A TAPE AND DUMP ON LINE PRINTER
*
      SUBROUTINE SDUMP
      OUTPUT(102) 'SPECIFY LREC, NREC, MODE, UNIT'
      OUTPUT(102) 'MODE=0-BCD; 1-BINARY'
      INPUT(101)
      NLINES = LREC/8
      IF(NLINES*8 .LT. LREC) NLINES = NLINES + 1
      DO 30 I = 1,NREC
      DO 5 ICLR = 1,LREC
    5 IBUF(ICLR) = 0
      IF(MODE.EQ.0) CALL BCDIN(UNIT,IBUF,LREC,IND);GO TO 10
      CALL BININ(UNIT,IBUF,LREC,IND)
   10 IF(IND .NE. 0) OUTPUT(102) 'YOU HIT AN EOF';GO TO 40
      DO 20 L = 1,NLINES
      K = (L-1)*8 + 1
      WRITE(6,200) IBUF(K),IBUF(K+1),IBUF(K+2),IBUF(K+3),IBUF(K+4),
     * IBUF(K+5), IBUF(K+6), IBUF(K+7)
  200 FORMAT (1X,8O12)
   20 CONTINUE
   30 CONTINUE
   40 RETURN
      SUBROUTINE TCOPY
*
*    COPIES ONE TAPE ONTO ANOTHER TAPE IN BCD OR BINARY
*     WITH THE OPTION OF PUTTING AN ENDFILE ON THE OUTPUT TAPE
*     WHEN THE COPYING IS COMPLETED THE VALUE OF IRECNT, THE
*     NUMBER OF RECORDS THAT HAVE BEEN TRANSCRIBED ONTO THE OUTPUT TAPE ,
*     WILL BE OUTPUT
*
      OUTPUT(102) 'SPECIFY LREC,NREC,INMODE,OUTMODE,INUNIT,OTUNIT,EOF'
      OUTPUT(102) 'MODE=1-BINARY;0-BCD'
      INPUT(101)
      IRECNT = 0
      DO 30 I = 1,NREC
      DO 10 J = 1,LREC
   10 IBUF(J) = 0
      IF(INMODE.EQ.0) CALL BCDIN(INUNIT,IBUF,LREC,IND);GO TO 20
      CALL BININ(INUNIT,IBUF,LREC,IND)
   20 IF(IND .NE. 0) OUTPUT(102) 'YOU HIT AN EOF'; GO TO 40
      IF(OUTMODE.EQ.0) CALL BCDOUT(OTUNIT,IBUF,LREC,IND);GO TO 30
      CALL BINOUT(OTUNIT,IBUF,LREC,IND)
   30 IRECNT = IRECNT + 1
   40 IF(EOF .EQ. 1) CALL WEOF(OTUNIT,0)
```

```
      OUTPUT(102) IRECNT
      RETURN
      SUBROUTINE ADUMMY
      RETURN
      END
```

```
EXPUNGE

TITLE ESP93

[EXTENDED SIGNAL PROCESSING PROGRAM

[VERSION 1175, REVISION A

[11/6/75

NOCARRET
ENTRY ESP93,INIT,A9300,INI2,
NPAR,TSFLG,TDXDY,LDXDY,DTXY,WAIT1,NEWL,
INI5,INI7,INI8,TLOOP,TL10,TL30,TL50,
CDXDY,NEXT,MOVED,FREQD,FREQ2,FREQ3,FREQ4,
F2,F3,TIMED,CONVI,CONVF,FSD,FSD1,SLIST,
GPAR,GP10,GP40,GP60,ATOB,PNAME,BLANK,
BEGIN,INTL,INTS,INTSL,INTL9,
CTBL,PIU,SDU,LDU,SCLN,
FBU,SCLD,READ,SWITCH,REMOF,REMOV,REM4,REM8,
ROT,SLADJ,SCADJ,SPL,SPLP,
IPL,LINE,GRP,NPTR,NSL,TIMED,FTIME,RESB,LP1,LP2,LP3,
INTX,XGAP,DELX,SXOYO,NFRAM,NSHUT,PICS,MOVIE,
LCTR,ALINE,BLINE,GCTR,XSP,PCTR,SBA,LDXN,LDYN,VDXY,
TEMP1,DBA,TIME,INTGT,FUNCT,SCTR,CS1,LIGHT,RBUF,
SCL1,BB,IB,CAPTR,WBUF,CBLK,
VERSAT,DBLK,DBLK1,VTSEND,GET93,ANGLE;
CARRET


DBLK1=16000
BASEA=10000
BASEB=BASEA+1500.
NN=0
IREPEAT ZZ,(1,2,3,4,5,6,7,8,9,10)
ABLK\ZZ=BASEA+NN
BBLK\ZZ=BASEB+NN
NN=NN+150.
ENDI

MDC5=25000VH
MD10=30000VH


TPVT1=77750
TPVT2=77751
OVFPV=77771
TTYOF=-3
PINPV=77743
```

```
ESP93:          JUMP            *               [AGT/9300 ENTRY
                JPSR            $AXINZ          [INITIALIZE 9300 COMMUNICATIONS
                JPSR            $AXINT
                MDAR            $FCLH           [SET FRAME CLOCK PIVOT
                ARMD            77755

                MDAR'F          $CHARS          [CLEAR CHAR BUFFER
                MDAS'F'N        1
                ARMD            TEMP
                ARX0'F
                ARMD'X'I        TEMP
                MDAR            TEMP
                MDX0'F          $ECHAR
                JPLS            *-4

                MDIC'A'L;       -10             [LCG OFF
                MD10            C0              [AVG, CLOCK AND SCOPE OFF
                JUMP            INI1

INIT:           0                               [REINITIALIZATION
                JPSR            $AXINT          [RESET COMMAND WORDS
                MDAR'N          NPAR            [WAIT FOR INPUT
                JPAN            *-1
                JPSR            GPAR            [PROCESS INPUT

INI1:           ARX0'F                          [RESET SWITCH OPTIONS
                ARMD            HSL
                ARMD            PICS
                ARMD            STARF
                ARMD            RELINE
                ARMD'0          LIGHT
                MDAR            C1
                ARMD            SCAD6

                MDAR'H          $SW01           [LOOK FOR INITIAL 9300 COMMAND
                MDX0'F          3
                JPLS            *-2             [JUMP IF COMMAND NOT CODE 2
                MDAR            $SW01           [READ INITIAL PARAMETERS
                ARMD'L
INADR:          0
                MDAR'H          $SW02
                ARMD            NIP
                JPSR            $ROWFW
                                0
                                INADR
                                IPL
NIP:                            0
                JPSR            $FINSH          [SEND COMPLETION CODE

[SETUP INITIAL DISPLAY ORDINATES

RECON:
                MDAR'F          CAPTR           [SETUP INIT LINE POINTERS
                ARMD            CAPTR
```

```
MDARMF       CBPTR
ARMD         CBPTR
```

```
            MDAR'N        LINE          [GET LINE COUNT
            MDAS'F        1
            ARMD          LCTR

INI2:       MDAR'I'X      CAPTR         [GET LINE BUFFER
            MDAS'F'N      1
            ARMD          ALINE
            MDAR'I'X      CBPTR
            MDAS'F'N      1
            ARMD          BLINE
            MDAR'H        X0            [GET INIT SPACING
            MDAE'H'N      INTX
            ARMD          XSP

            MDAR'N        GRP           [SET GROUP COUNT
            MDAS'F        1
            ARMD          GCTR

INI3:       MDAR'N        NPTR          [SET POINT COUNT
            MDAS'F        1
            ARMD          PCTR
            ARXB'F                      [GET MOVE BIT
            ARMD          TEMP

INI4:       MDAR          XSP           [BUMP SPACING
            MDAE'H        INTX
            MDAR'A        M1
            ARMD          XSP
            MDAR'B        TEMP          [SET DRAW/MOVE BIT
            ARMD'I'X      ALINE         [ENTER VALUE
            ARMD'I'X      BLINE
            MDAR          C1            [GET DRAW BIT
            ARMD          TEMP
            MDAR'X        PCTR          [BUMP POINT COUNT
            JPLS          INI4

            MDAR'X        GCTR          [BUMP GROUP COUNT
            JPLS          *+2
            JUMP          INI5
            MDAR          XSP           [ADD GAP
            MDAE'H        XGAP
            ARMD          XSP
            JUMP          INI3

INI5:       MDAR          XSP           [SET EOL BIT
            MDAR'B        C1M1
            ARMD'I        ALINE
            ARMD'I        BLINE
            MDAR'X        LCTR          [BUMP LINE COUNT
            JPLS          INI2

            MDAR          NPTR          [SETUP BREAK POINTS
            ARMD          L1
            MDAS          NPTR
```

```
ESP93               VERSIØN 11  REVISIØN 3  CREATED 06 JUN 66      DATE

                           ARMD             L2
                           MDAS             NPTR
                           ARMD             L3
```

```
[SET UP ALTERNATE LINE DISPLAY BUFFER

INI7:           MDAR            GRP             [SET PØINT CØUNT
                MPYL            NPTR
                0
                ARRS            1
                ARMD            PCTR
                MDAR            ABLK            [GET BUFFER ADDRESS
                ARMD            *+2
                JPSR            MØVED           [TRANSFER DATA
                                0
                                CBLK
                                PCTR
                MDAR'B          XGAP            [SETUP PØINTS IN GAP
                DIVL            INTX
                0
                ARMD            GAP

                MDAR            NPTR
                ARMD            R1
                MDAS            GAP
                MDAS'N          C1
                ARMD            R2
                MDAR            L2
                MDAS            GAP
                MDAS'N          C1
                ARMD            R3
                MDAR            GAP
                MDAS            GAP
                MDAS'N          C2
                ARMD            TEMP
                MDAR            L2
                MDAS            TEMP
                ARMD            R4
                MDAR            L3
                MDAS            TEMP
                ARMD            R5
                MDAR            RELINE          [SKIP IF REGRØUP
                JPAN            RECØN1

[SETUP DXDY TABLE FØR LINE DISPLAY

                MDAR'L'N;       06000           [INIT. ANGLE  APPRØX 30 DEG
                JPSR            ANGLE
```

```
                MDAR'A          MADR
                ARMD'N          LDYN            [SAVE Y SPACING

                ARMD'Ø          CTØG
                JPSR            CDXDY           [CØMPUTE DXDY


        [SET UP DØUBLE BUFFER DISPLAY LIST

        RECØN1:
                JPSR            MØVED
                                ABLK
                                $GRP0
                                LINE
                JPSR            MØVED
                                BBLK
                                $GRP1
                                LINE
                ARXØ'F                          [RESET BUFFER SELECTØR
                ARMD            $LGRP
                ARMD            $NBUF           [RESET NEW BUFFER READY INDICATØR
                ARMD            STØG            [RESET SPØT TØGGLE
                MDAR'F          SPL-1           [RESET SPØT PTR
                ARMD            SPLP

        [SET UP SIDE LINE DISPLAY ØRDINATES

                MDAR'F          $NADAT          [SETUP SIDE LINE
                MDAS'F'N        1
                ARMD            SBA
                ARXØ'F                          [SET INITIAL SPACING
                ARMD            XSP
                MDAR'N          GRP             [SETUP GRØUP CØUNT
                MDAS'F          1
                ARMD            GCTR
        INI8:   MDAR'N          NPTR            [SETUP PØINT CØUNT
                MDAS'F          1
                ARMD            PCTR
                ARXØ'F                          [RESET MØVE BIT
                ARMD            TEMP
```

```
INI9:   MDAR        XSP         [PACK DATA
        MDAR'A      M1
        MDAR'B      TEMP
        ARMD'I'X    SBA         [ENTER DATA
        MDAR        C1          [SET DRAW BIT
        ARMD        TEMP
        MDAR        XSP         [BUMP SPACING
        MDAE'H      DELX
        ARMD        XSP
        MDAR'X      PCTR        [BUMP POINT COUNT
        JPLS        INI9
        MDAR        XSP         [BUMP GAP
        MDAE'H      XGAP
        ARMD        XSP
        MDAR'X      GCTR        [BUMP GROUT
        JPLS        INI8

        MDAR'I      SBA
        MDAR'B'H    C1
        ARMD'I      SBA
        MDAR        SXDYO       [SET UP DXDY
        ARMD        $NDXDY
        MDAR'L                  [RESET WORDING BUFFER
        MDC5        CBLK
        ARMD        WBUF
        MDAR'F      $GRPO
        ARMD        DGRP
        MDAR'F      $GRP1
        ARMD        WGRP
        MDAR'L;     2525252525
        ARMD        ALTB
        MDAR        RELINE      [SKIP IF REGROUP
        JPAN        RECON2

        ARXB'F
        ARMD        $AUXD       [CLEAR SIDE LINE DISPLAY OPTION
        ARMD        CLPTR       [RESET CRNT LINE PTR
        MDAR'L;     4000        [SET UNITY SCALE FACTOR
        ARMD        SCL1        [GROUP SCALES
        ARMD        SCL2
        ARMD        SCL3

[SET UP DISPLAY PARAMETERS

        MDAR        LINE        [NUMBER OF DISPLAY LINES
        ARMD        $NLINE
        MDAR'H      M1629       [INITIAL PICTURE SCALE
        ARMD        $SCALE
        MDAR        LIGHT       [SPOT LIGHT OPTIO
        ARMD        $SFLG
```

```
RECON2:     ARXO'F
            ARMD        LP1
            ARMD        LP2
            ARMD        LP3
            MDAR        NPTR
            MDAS'F'N    1
            ARMD        EP1
            ARMD        EP2
            ARMD        EP3
            MDAR        GRP            [MODIFY IT FOR GROUP
            MDXO        C1
            JPLS        .+2
            JUMP        INI10
            MDAR        LP1
            MDAS        NPTR
            ARMD        LP2
            MDAS        NPTR
            ARMD        LP3
            MDAR        EP1
            MDAS        NPTR
            ARMD        EP2
            MDAS        NPTR
            ARMD        EP3

INI10:      MDAR'N      C2             [SET INIT. SPOTLIGHT POSITION
            ARMD        LCTR
            MDAR'F      LP1-1          [ADDR OF LEAD POINT
            ARMD        TEMP1
            MDAR'F      SPOT-1         [ADDR OF SPOT DISPLAY
            ARMD        TEMP2
            MDAR'F      CS1-1          [ADDR OF CENTER OF SPOT
            ARMD        SPTR
```

```
INI11:      MDAR        NPTR        [POSITION SPOTS
            MDAS'N      IWIDE       [AT THE CENTER OF LINE
            ARRS        1
            MDAS'I'X    TEMP1       [ADD LEAD POINT
            ARMD        TEMP        [LEADING EDGE OF SPOT
            ARMD'I'X    TEMP2       [SETUP S1,S2,S3
            MDAR        IWIDE       [GET CENTERS
            ARRS        1
            MDAS        TEMP
            ARMD'I'X    SPTR

            MDAR'X      LCTR
            JPLS        INI11

            MDAR        GRP
            ARMD        NSPOT
            MDXO'F      1
            JPLS        .+3
            MDAR        NSL
            ARMD        NSPOT
            JPSR        GSPOT
            JPSR        FREQD       [COMPUTE CENTER FREQUENCY
            MDAR        RELINE
            JPAN        .+2
            JUMP        INI12
            MDIO        $AVGON      [TAKE RELINE PATH
            JPSR        $DISPL
            JUMP        REDONE

INI12:      MDAR        TIMEO       [STARTING TIME
            JPSR        TIMED
            ARXO'F
            ARMD        FUNCT       [CLEAR FS LATCH
            JPSR        FSD         [CLEAR FS ON COUNT
            MDIO        $AVGON      [AVG, SCOPE, CLOCK ON
            JPSR        $DISPL      [START DISPLAY


            MDAR'F      $CHARS
            MDAS'F'N    1
            ARMD        CP1         [RESET PTR TO CHAR BUFFER

            MDAR'L                  [SET UP FOREGROUND/BACKGROUND
            JUMP        BEGIN
            ARMD        WT1

TLOOP:      JPSR        ICHTY       [INPUT CHAR FROM TTY
                        2
            ARMD'L                  [SAVE AR
TL5:        0
            MDAR'N      NPAR
            JPAN        TL10        [GO ON, READY FOR NEW INPUT

TL7:        MDAR        TL5         [RESTORE AR
```

```
            JUMP        TLØØP       [RESTART TTY INPUT

TL10:       MDAR        TTYC        [GET THE ASCII CHAR
            MDAR'A'F    177         [MASK ØUT PARITY
            MDXØ'F      15          [IS IT CARRIAGE RETURN>Q
            JPLS        TL30        [NØ
```

```
                ARMD'O       NPAR         [SET PARAM. VALUE READY FLAG
                JUMP         TL7          [AND RESTART TTY INPUT

TL30:           MDXO'F       15'177       [RUBOUT
                JPLS         TL50         [NO

TL40:           MDAR'F       $CHARS
                MDAS'F'N     1
                MDXO         CP1
                JPLS         .+2          [THIS JUMP IF CHAR TO RUB OUT
                JUMP         TL7          [ELSE NO CHAR YET, IGNORE RUBOUT

                ARXO'F
                ARMD'I       CP1          [REMOVE LAST CHAR FROM BUFFER
                MDAR         CP1          [AND DECREMENT PTR
                MDAS'F'N     1
                ARMD         CP1
                JUMP         TL7          [START TTY AGAIN

TL50:           MDAR'F       $ECHAR
                MDAS'F'N     1
                MDXO         CP1
                JPLS         .+2          [JUMP IF ROOM FOR A CHAR
                JUMP         TL7          [ELSE IGNORE THE CHAR, WAIT FOR C/R

                MDAR         TTYC         [IS CHAR. A ''*''
                MDAR'A'F     177
                MDXO'F       52
                JPLS         .+2          [NO, SKIP IT
                ARMD'O       STARF        [SET *FLAG

                MDAR'B       TTYC         [GET THE CHAR, POSITIONED
                MDAR'A'F     376          [MASK OUT PARITY
                ARMD'I'X     CP1          [AND PUT IT IN BUFFER
                ARMD'O       TSFLG        [SET DISPLAY FLAG
                JUMP         TL7          [GO RESTART TTY

[SUBROUTINE TO COMPUTE DXDY TABLE

CDXDY:          JUMP         .
                MDAR'N       CTOG         [GET ALTERNATE BUFFER
                ARMD         CTOG
                JPAN         .+3
                MDAR'F       LDXDY
                JUMP         .+2
                MDAR'F       TDXDY
                ARMD         WDXY
                MDAS         LINE         [START WITH BOTTOM OF STACK

                MDAS'F'N     1
                ARMD         SBA
                MDAR'N       LINE         [RESET LINE COUNT
                MDAS'F       2
```

ARMD LCTR

```
                ARX0'F                          [SET JP INITIAL VALUE
                ARMD            VDXY
                ARMD'I          SBA             [ENTER VALUE
NEXT:           MDAR            SBA             [BUMP STACK POINTER
                MDAS'F'N        1
                ARMD            SBA
                MDAR            VDXY            [BUMP DXDY VALUE
                MDAE'H          LDXN
                MDAS            LDYN
                ARMD            VDXY
                ARMD'I          SBA
                MDAR'X          LCTR            [BUMP LINE COUNT
                JPLS            NEXT

                MDAR            WDXY            [UPDATE DISPLAY                 POINT
                ARMD            DTXY
                MDIR            CDXDY

[SUBROUTINE TO DO SOME OF THE COMPUTATION FOR THE DXDY TABLE
[CALLED BY INI7 AND ROTO

ANGLE:          JUMP            *
                JPSR            $SNCOS
                MDAR            INTX            [GET SPACING
                MPYL            LINE
                0
                ARRS            1
                ARMD            TEMP
                ARX0'F
                MDAS            $SINE           [EXTEND SIGN
                DIVL            TEMP
                0
                ARMD            TEMP
                ARX0'F
                MDAS            TEMP
                ARMD            XINC            [SAVE POINT COUNT IN X
                MPYL            INTX            [QUANTIZE X
                0
                ARRS            1
                MDAR'A          MADR
                ARMD            LDXN            [SAVE X-SPACING
                ARX0'F
                MDAS            $COSN           [EXTEND SING
                DIVL            LINE
                0
                MDIR            ANGLE           .ETURN
```

```
        [SUBROUTINE TO TRANSFER DATA

MOVED:          JUMP            *
                MDAR'I          MOVED           [GET SOURCE ADDRESS
                MDAS'F'N        1
                ARMD            SBA

                MDAR'I'X        MOVED           [GET DESTINATION ADDRESS
                MDAS'F'N        1
                ARMD            DBA
                MDAR'I'X        MOVED           [GET WORD COUNT
                ARMD            TEMP
                MDAR'I'N        TEMP
                MDAS'F          1
                ARMD            WCTR
MORE:           MDAR'I'X        SBA             [TRANSFER DATA
                ARMD'I'X        DBA
                MDAR'X          WCTR
                JPLS            MORE
                MDIR'X          MOVED


        [SUBROUTINE TO CALCULATE SPOTLIGHT FREQUENCIES

FREQD:          JUMP            *

                MDAR'N          LIGHT
                ANIR            FREQD           [RETURN IF NOT REQD
                MDAR            GRP             [RESET SPOT COUNT
                MDXO'F          1
                JPLS            FREQ1
                MDAR'N          NSL
                JUMP            FREQ2
```

```
FREQ1:     MDAR'N      GRP
FREQ2:     MDAS'F      1
           ARMD        LCTR

           MDAR        CS1          [GET CENTER SPØT
           MDAS        ST1          [ADD STARTING PØINT
           ARAR'F'B
           DIVL        RESØ         [CØNVERT TØ FREQUENCY
           0
           ARMD        CF1          [SAVE INTEGER
           MDAR'A'H    MADR         [GET REMAINDER
           ARRS        1
           DIVL        RESØ         [DIVID ØUT REMAINDER
           0
           MDAR'A      MADR
           JPSR        CØNVF        [CØNVERT FRACTIØN
                       4
                       $F1R1
           MDAR        CF1          [GET INTEGER PART
           MDAR'A      MADR         [CØNVERT INTEGER
           JPSR        CØNVI
                       3
                       $F1L3
                       $F1L2
                       $F1L1
           MDAR'X      LCTR         [BUMP SPØT CØUNT
           JPLS        FREQ3        [MØRE
           MDAR'N      C13          [CLEAR REMAINDING DISPLAY
           ARMD        LCTR
           MDAR'F      F2-1
           MDAR'Ø'H    C1
           ARMD        SBA
           MDAR        C40
           ARMD'I'X'B  SBA
           MDAR'X      LCTR
           JPLS        *-3
           MDAR        C1           [SET NSPØT TO 1
           ARMD        $NSPØT
           ARMD        NSPØT
           MDIR        FREQD

FREQ3:     MDAR        CS2          [DØ NEXT SPØT
           MDAS        ST2
           ARAR'F'B
           DIVL        RESØ
           0
           ARMD        CF2
           MDAR'A'H    MADR
           ARRS        1
           DIVL        RESØ
           0
           MDAR'A      MADR
           JPSR        CØNVF
                       4
```

```
                    $F2R1
        MDAR        CF2
        MDAR'A      MADR
```

```
                JPSR            CØNVI
                                3
                                $F2L3
                                $F2L2
                                $F2L1

                MDAR'X          LCTR
                JPLS            FREG4
                MDAR'N          C6          [CLEAR REMAINING DISPLAY
                ARMD            LCTR
                MDAR'F          F3-1
                MDAR'B'H        C1
                ARMD            SBA
                MDAR            C40
                ARMD'I'X'B      SBA
                MDAR'X          LCTR
                JPLS            *-3
                MDAR            C2          [SET NSPØT TO 2
                ARMD            $NSPØT
                ARMD            NSPØT
                MDIR            FREGD

FREG4:          MDAR            CS3
                MDAS            ST3
                ARAR'F'B
                DIVL            RESB
                0
                ARMD            CF3
                MDAR'A'H        MADR
                ARRS            1
                DIVL            RESB
                0
                MDAR'A          MADR
                JPSR            CØNVF
                                4
                                $F3R1
                MDAR            CF3
                MDAR'A          MADR
                JPSR            CØNVI
                                3
                                $F3L3
                                $F3L2
                                $F3L1
                MDAR            C3          [SET NSPØT TØ 3
                ARMD            $NSPØT
                ARMD            NSPØT
                MDIR            FREGD

F2:             $F2L1;$F2L2;$F2L3
                $F2R1;$F2R2;$F2R3;$F2R4
F3:             $F3L1;$F3L2;$F3L3
                $F3R1;$F3R2;$F3R3;$F3R4
```

```
[SUBROUTINE TO UPDATE TIME

TIMED:          JUMP            .
                ARMD            TIME            [UPDATE TIME
                ARAR'B'F
                DIVI            60.             [GET NUMBER OF SECONDS
                0
                ARMD            TEMP1
                ARRS            16.
                0
                JPSR            CONVI           [CONVERT SECONDS
                                2
                                $SEC2
                                $SEC1
                MDAR'B          TEMP1           [GET NUMBER OF MINUTES
                MDAR'A          MADR
                DIVI            60.
                0
                ARMD            TEMP1
                ARRS            16.
                0
                JPSR            CONVI           [CONVERT MINUTES
                                2
                                $MIN2
                                $MIN1
                MDAR            TEMP1           [GET NUMBER OF HOURS
                MDAR'A          MADR
                JPSR            CONVI           [CONVERT HOURS
                                2
                                $HOUR2
                                $HOUR1
                MDIR            TIMED

[SUBROUTINE TO CONVERT INTEGERS TO ASCII

CONVI:          JUMP            .

                ARMD            INTG            [SAVE INTEGER VALUE
                MDAR'I'N        CONVI           [GET CHAR COUNT
                MDAS'F          1
                ARMD            LCTR1
[illegible]     MDAR'X          LCTR1
                JPLS            .+2
                JUMP            CNV2            [CONVERT INTEGER TO DECIMA;
                MDAR'X'I        CONVI
                ARMD            TEMP
                [illegible]     INTG
                [illegible]     12

                                [illegible]
                                [illegible]     [CONVERT DECIMAL TO ASCII
```

```
                MDAS'F          60
                ARMD'I'B        TEMP            [ENTRY ASCII CHAR
                MDAR            INTG            [DØ NEXT CHARACTER
                MDAR'A          MADR
                ARMD            INTG
                JUMP            CNV1
CNV2:           MDAR'X'I        CØNVI
                ARMD            TEMP
                MDAR            INTG
                MDAS'F          60
                ARMD'I'B        TEMP            [ENTER LAST ASCII CHAR
                MDIR'X          CØNVI

[SUBRØUTINE TØ CØNVERT FRACTIØN

CØNVF:          JUMP            *
                ARMD            TEMP            [SAVE VALUE
                MDAR'I'N        CØNVF           [GET DIGIT CØUNT
                MDAS'F          1
                ARMD            LCTR1
                MDAR'I'X        CØNVF           [GET ADDRESS
                MDAS'F'N        1
                ARMD            SPTR
CNVF1:          MDAR            TEMP            [CØNVERT VALUE
                MPYI            12
                0
                ARMD            TEMP            [SAVE REMAINDING VALUE
                ARRS            15.
                0
                MDAS'F          60
                ARMD'I'X'B      SPTR            [UPDATE DIGITS
                MDAR            TEMP
                MDAR'A          MADR
                ARRS            1
                ARMD            TEMP
                MDAR'X          LCTR1           [BUMP DIGIT CØUNT
                JPLS            CNVF1
                MDIR'X          CØNVF           [RETURN


[SUBRØUTINE TØ TURN ØN FUNCTIØN SWITCH INDICATØRS

FSD:            JUMP            *
                ARHS            1               [SAVE SWITCH STATUS
                ARMD            FCT
                MDAR            M35             [BLANK ØUT SWITCH BUFFER
                ARMD            LCTR
                MDAR'F          SBUF-1
                ARMD            SPTR
                MDAR            C40
                ARMD'I'X'B      SPTR
                MDAR'X          LCTR
                JPLS            *-3
```

```
              MDAR'F        SBUF-1        [RESET BUFFER POINTER
              ARMD          SPTR
              MDAR'N        C17           [RESET SWITCH COUNTER
              ARMD          LCTR
     FSD0:    MDAR'B        FCT           [CHECK SWITCH STATUS
              ARMD          FCT
              JPAN          FSD3          [ON - DISPLAY NUMBER
     FSD1:    MDAR'X        LCTR
              JPLS          FSD0

              MDAR          $END2         [SET TEXT END OF LIST
              ARMD'I'X      SPTR
              MDAR          M35           [TRANSFER DISPLAY BUFFER
              ARMD          LCTR
              MDAR'F        SBUF-1
              ARMD          IB
              MDAR'F        SLIST-1
              MDAR'O'H      C1
              ARMD          9B
     FSD2:    MDAR'I'X      IB
              ARMD'I'X      9B
              MDAR'X        LCTR
              JPLS          FSD2
              MDIR          FSD           [RETURN

     FSD3:    MDAR'X        SPTR
              ARMD          FSD5
              MDAR'X        SPTR
              ARMD          FSD4
              MDAR          LCTR
              MDAS'F        18.
              JPSR          CONVI
                            2
     FSD4:                  0
     FSD5:                  0
              JUMP          FSD1

     SLIST:   $S1A; $S1B                  [SWITCH DISPLAY LIST
              $S2A; $S2B; $S3A; $S3B
              $S4A; $S4B; $S5A; $S5B
              $S6A; $S6B; $S7A; $S7B
              $S8A; $S8B; $S9A; $S9B
              $S10A; $S10B; $S11A; $S11B
              $S12A; $S12B; $S13A; $S13B
              $S14A; $S14B; $S15A; $S15B
              $S16A; $S16B; $F1A; $F1B
              $F2A; $F2B
```

```
        [ROUTINE TO GET NEW PARAMETER VALUE TYPED IN

GPAR:           JUMP            *

                MDAR            FUNCT
                MDAR'A          MSKSW
                ARMD            FUNCT
                MDAR            $SW81           [SAVE NAMFLIST BUFFER ADDR.
                ARMD            A93CO

GP1:          ARMD              TSFLG           [RESET INPUT TEXT DISPLAY FLAG

GP5:            MDAR'F'N        4               [CLEAR AND PACK PNAME BUFFER
                ARMD            T2
                MDAR'F          PNAME-1
                ARMD            T3
                MDBR            BLANK
                BRMD'I'X        T3
                MDAR'X          T2
                JPLS            *-2

                MDAR'F          $CHARS
                MDAS'F'N        1
                ARMD            T1              [RESET PTR TO CHARS TABLE
                MDAR'F          PNAME
                ARMD            T2              [RESET PTR TO PACK BUFFER
                ARXO'F
                ARMD            T3              [RESET CNT OF CHARS PACKED INTO CRNT
                ARMD            T4              [RESET TOTAL CHAR PACKED COUNT
GP10:           MDAR'I'X        T1              [GET NEXT CHAR
                JPLS            GP30            [JUMP IF NON-ZERO

GP20:           JPSR            $ROAFW
                                -0
                                A93CO
                                PNAME
                                5

                JPSR            $FINSH
                MDAR'F          $CHARS          [CLEAR CHARS DISPLAY BUFFER
                MDAS'F'N        1
                ARMD            T1
                MDBR            CO
                BRMD'I'X        T1
                MDAR            T1
                MDXO'F          $ECHAR
                JPLS            *-3
                ARXO'F
                ARMD            NPAR            [RESET NEW PARAM. READY FLAG
```

```
         MDAR'F        $CHARS      [RESET PTR T8 CHARS BUFFER
         MDAS'F'N      1
         ARMD          CP1

         MDAR          STARF       [LAST REC8RD
         JPAN          GP25
         MDAR'N        NPAR        [WAIT F8R NEXT BL8CK
         JPAN          *-1
         JUMP          GP1         [G8 DI IT

GP25:
         ARX8'F
         ARMD          STARF       [RESET E8R INDICAT8R
         MDIR'X        GPAR

GP30:    ARRS          1
         MDAS'F'N      37
         ARMD          T5          [SAVE F8R ASCII T8 BCD TABLE L88KUP
         JPAN          GP40        [JUMP IF ASCII 0-37 (USE CHECK)

         MDAS'F'N      100
         JPAN          GP50        [JUMP IF T8 D8 TABLE L88KUP

GP40:    MDAR          C2          [ELSE ASCII 140-177 (USE CHECK)
         ARMD          T5

GP50:    MDAR'F        AT8B-1
         MDAS          T5
         ARMD          T5          [SAVE PTR T8 TABLE ENTRY

         MDAR'X        T3          [BUMP CHAR C8UNT
         MDX8'F        5
         JPLS          GP60        [JUMP IF R88M IN CRNT W8RD

         MDAR          C1          [ELSE SET CNT T8 1
         ARMD          T3
         MDAR'X        T2          [BUMP PTR T8 PACK W8RD

GP60:    MDAR'F        BTAB-1
         MDAS          T3
         ARMD          T6          [SAVE PTR T8 MASK TABLE

         MDAR'F        LSFT-1
         MDAS          T3
         ARMD          T7          [SAVE PTR T8 SHIFT TABLE

         MDAR'I        T2          [GET CRNT W8RD
         MDIR'I        T6          [MASK 8UT CRNT P8SITI8N
         ARBR'F                    [SAVE IN BR
```

```
                MDAR'I       T5           [GET THE BCD CHAR
                MDIR'I       T7           [SHIFT IT
                0

                BRAR'0'F                  [MERGE INTO CRNT WORD
                ARMD'I       T2           [AND SAVE NEW CRNT WORD
                MDAR'X       T4           [BUMP TOTAL CHAR CNT
                MDX0'F       20.
                JPLS         GP10         [GET NEXT CHAR IF NOT 20 YET
                JUMP         GP20         [ELSE ALL DONE

        BTAB:   MDAR'A       M0611        [MASK TABLE
                MDAR'A       M1217
                MDAR'A       M1823
                MDAR'A       M2429

        LSFT:   ARLS         18.          [SHIFT TABLE
                ARLS         12.
                ARLS         6
                0

        [ASCII TO BCD CONVERSION TABLE --

        ATOB:   60                        [SPACE
                17;17;17;17;17;17         [ASSORTED INVALIDS
                14                        ['
                74                        [(
                34                        [)
                54                        [*
                20                        [+
                73                        [,
                40                        [-
                33                        [.
                61                        [/
                0                         [0
                1;2;3;4;5;6;7;10;11       [1 TO 9
                15                        [:
                17                        [;
                36                        [LT
                13                        [=
                16                        [GT
                17;17                     [2 INVALIDS
                21;22;23;24;25;26;27;30;31 [A TO I
                41;42;43;44;45;46;47;50;51 [J TO R
                62;63;64;65;66;67;70;71   [S TO Z
                17;17;17;17;17 [5 INVALIDS

        PNAME:  0;0;0;0;0

        BLANK:  60606060
```

```
        [MAIN LOOP CALCULATIONS

        BEGIN:          MDAR'N          NPAR            [TTY INPUT REQUEST
                        JPAN            SCAN            [NO
                        MDAR            C40             [YES, SET NAMELIST REQ BIT
                        MDAR'8          FUNCT           [PUT IN AS IF FUNCTION SWITCH
                        ARMD            FUNCT

        SCAN:           MDAR'K          FUNCT           [DISPLAY SWITCH STATUS
                        JPSR            FSD

                        MDAR'K          $SW81           [LOOK FOR 9300 COMMAND
                        JPAN            BEGIN
                        MDAR'H          $SW81           [GET COMMAND  CODE
                        MDAR'A          MADR
                        MDAS'F'N        21              [CHECK FOR LEGALITY
                        JPAN            *+2             [OK
                        JUMP            SC5             [IGNORE ILLEGAL CODE

                        MDAS'F          22
                        MDAS'F          CTBL            [BUILD JUMP ADDR
                        MDAR'H'8        C1              [SET INDIRECT BIT
                        ARMD            CTBL
                        JPSR'I          CTBL            [PROCESS COMMAND
        SC5:
                        JPSR            $FINSH          [CLEAR ACCESS FOR NEXT COMMAND
                        JUMP            BEGIN



        [9300 COMMAND TABLE

        CTBL:           0               [CURRENT COMMAND LINK
                        INIT            [CODE 00 - INITIALIZATION
                        FSR             [     01 - FUNCTION SWITCH REQUEST
                        GPAR            [     02 - NAMELIST INPUT REQUEST
                        PIU             [     03 - PARAMETER UPDATE
                        SLO             [     04 - SIDE LINE DISPLAY OPTION
                        SDU             [     05 - SIDE LINE DATA UPDATE
                        LDU             [     06 - LINE DATA UPDATE
                        ROT             [     07 - ROTATION
                        SCADJ           [     10 - AMPLITUDE SCALING
                        MOVIE           [     11 - MOVIE OPTION
                        FBU             [     12 - FREQUENCY SWEEP OPTION
                        FSDIR           [     13 - FREQUENCY SWEEP DIRECTION
                        SPO             [     14 - SPOTLITE DISPLAY OPTION
                        HSO             [     15 - HARMONIC RELATED SPOTS
                        SLADJ           [     16 - SPOT LITE ADJUST
                        REGRP           [     17 - RE-GROUP OPTION
                        VERSAT          [     20 - HARD-COPY OPTION
```

```
[FUNCTION SWITCH ASSIGNMENTS:

[               1                RE-INITIALIZATION
[               2                SIDE LINE DISPLAY OPTION
[               3                ROTATION
[               4                DISPLAY LOOP
[               5                SPOTLITE ADJUST
[               6                HARMONIC RELATED SPOTLITE
[               7                SPOTLITE DISPLAY OPTION
[               8                AMPLITUDE SCALING
[               9                FREQUENCY SWEEP OPTION
[               10               FREQUENCY SWEEP DIRECTION
[               11               SINGLE SWEEP
[               12
[               13               HARD-COPY OPTION
[               14
[               15
[               16               MOVIE OPTION

[CONTROL DIALS ASSIGNMENTS:

[               A                SPOTLITE ADJUST
[               B                SPOTLITE ADJUST
[               C                SPOTLITE ADJUST/ROTATION
[               D                AMPLITUDE SCALING
[               E                AMPLITUDE SCALING
[               F                AMPLITUDE SCALING


[SUBROUTINE TO OBTAIN HARD-COPY OUTPUT

VERSAT:         JUMP             .
                MDAR'N           LINE            [GET NUMBER OF LINES
                MDAS'F           1
                ARMD             LCTR            [SET UP LINE COUNTER

VERSC:          MDAR             DBLK            [DESTINATION BLOCK
                MDAS'F'N         1
                ARMD             DBA             [DESTINATION ADDRESS
                MDAR             NPTR            [GET NUMBER OF POINTS
                ARMD'I'X         DBA
                MDAR             LINE            [GET NUMBER OF LINES
                ARMD'I'X         DBA
                ARXO'F
                MDAS             LDXN            [GET X-INCREMENT
                ARMD'I'X         DBA
                ARXO'F
                MDAS             LDYN            [GET Y-INCREMENT
                ARMD'I'X         DBA
                MDAR             CLPTR           [GET CURRENT LINE POINTER
                ARMD'I'X         DBA
                JPSR             VTSEND
```

```
VERS1:      MDAR        DGRP        [GET SØURCE BLØCK ADDRESS
            MDAS'F'N    1
            ARMD        ISBA        [SØURCE BLØCK ADDRESS
```

```
VERS2:      MDAR          DBLK        [DESTINATIØN BLØCK
            MDAS'F'N      1
            ARMD          DBA         [DESTINATIØN ØF ADDRESS
            MDAR'I'X      ISBA
            MDAS'F'N      1
            ARMD          SBA         [SØURCE ADDRESS
            MDAR'N        NPTR        [GET NUMBER ØF PØINTS PER LINE
            MDAS'F        1
            ARMD          PCTR        [SET UP PØINT CØUNTER
VERS3:      MDAR'I'X      SBA         [GET X VALUE
            ARRS          15.
            ARMD'I'X      DBA         [STUFF IN DUMP BLØCK
            ARXØ'F                    [PUT ZERØ IN A REGIS.
            MDAS'I        SBA         [GET Y VALUE
            ARMD'I'X      DBA         [STUFF IN DUMP BLØCK
            MDAR'X        PCTR        [CHECK PØINT CØUNTER
            JPLS          VERS3       [NØT DØNE WITH LINE
            JPSR          VTSEND      [SEND ØUT THE LINE
            MDAR'X        LCTR        [CHECK LINE CØUNTER
            JPLS          VERS2       [ALL LINES NØT DØNE
            MDAR'L
VERS4:      0077773740                [TURN ØFF SWITCH 13
            MDAR'A        $LFNS
            ARMD          $LFNS
            MDAR          VERS4
            MDAR'A        FUNCT
            ARMD          FUNCT
            MDIR          VERSAT

VTSEND:     JUMP          .
            MDAR'K        $SWØ1       [WAIT FØR GØ AHEAD
            JPAN          .-1
            MDAR          $SWØ1       [GET 9300 DESTINATIØN ADDRESS
            ARMD          A9300
            MDAR'H        $SWØ2       [GET WØRD CØUNT
            ARMD          ØUTCTR
            JPSR          $RØWFW      [WRITE TØ 9300
                          -0
                          A9300
                          DBLK1
ØUTCTR:                   0
            JPSR          $FINSH
            MDIR          VTSEND
ISBA:                     0

[SUBRØUTINE TØ RE-GRØUP

REGRP:      JUMP          .
            ARMD'Ø        RELINE      [SET RELINE INDICATØR
            JUMP          RECØN       [TØ RE CØN LINE BUFFER
REDØNE:     JPSR          $FINSH
            JPSR          FØJ         [REGRØUP DATA
                          0
```

```
                    ARX0'F                          [RESET RELINE
                    ARMD            RELINE
                    MDIR'X          REGRP
    RELINE:         0
```

```
FSR:      JUMP       .
          MDAR       $SW01
          ARMD       A9300
          MDAR'H     $SW02
          ARMD       FSR1
          JPSR       $RØWFW
                     -0
                     A9300
                     FUNCT
FSR1:                0
          MDIR       FSR

FSDIR:    JUMP       .
          MDAR'F     ST1
          JPSR       GET93
          JPSR       FREQD
          MDAR'L
DIR2:     007775774C
          MDAR'A     $LFNS
          ARMD       $LFNS
          MDAR       DIR2
          MDAR'A     FUNCT
          ARMD       FUNCT
          MDIR       FSDIR

SL8:      JUMP       .
          MDAR'N     $AJXD
          ARMD       $AJXD
          MDIR       SL9

HS8:      JUMP       .
          MDAR'N     HSL
          ARMD       HSL
          MDIR       HS9

SP8:      JUMP       .
          MDAR'N     LIGHT
          ARMD       LIGHT
          ARMD       $SFLG
          MDIR       SP9

[SUBRØUTINE FØR MØVIES

MØVIE:    JUMP       .
          ARMD'9     PICS            [SET MØVIE REQD FLAG
          MDAR       PICS            [WAIT FØR IT TØ BE RESET
          JPAN       .-1
          MDIR       MØVIE           [RETURN

[SUBRØUTINE FØR PARAMETER UPDATE

PIU:      JUMP       .
          MDAR'F     IPL
          JPSR       GET93
```

```
                MDIR          PIU

        [SUBROUTINE FOR SIDE LINE DATA UPDATE

        SDU:    JUMP          *
                JPSR          READ        [READ SIDE LINE DATA

                MDAR'N        GRP         [SET GROUP COUNT
                MDAS'F        1
                ARMD          GCTR
                MDAR'F        SCL1        [GROUP SCALES
                ARMD          SD10
                MDAR'F        RBUF        [INPUT BUFFER
                ARMD          SD20
                MDAR'F        $NADAT      [SIDE LINE BUFFER
                ARMD          SD30

        SD05:   JPSR          SCLD        [SCALE DATA
        SD10:                 0
        SD20:                 0
        SD30:                 0
                              NPTR

                MDAR'X        GCTR        [BUMP COUNT
                JPLS          *+2
                JUMP          SD40
                MDAR'X        SD10
                MDAR          NPTR
                MDAS          SD20
                ARMD          SD20
                MDAR          NPTR
                MDAS          SD30
                ARMD          SD30
                JUMP          SD05

        SD40:   JPSR          SPU
                MDIR          SDU         [RETURN


        [SUBROUTINE TO GET DATA FROM THE 9300

        GET93:  JUMP          *
                MDAR'A        MADR        [MASK OUT UPPER BITS
                ARMD          GET1        [A REGISTER - BUFFER LOC TO GET1
                MDAR          $SW01
                ARMD          A9300
                MDAR'H        $SW02
                ARMD          GET2
                JPSR          $RBWFW
                              0
                              A9300
        GET1:                 0
        GET2:                 0
```

AD-A107 584 NAVAL POSTGRADUATE SCHOOL MONTEREY CA F/G 17/10
APPLICATION OF ACOUSTIC SIGNAL PROCESSING TECHNIQUES TO SEISMIC--ETC(U)
JUN 77 C E IRVINE
UNCLASSIFIED NPS-52IR77061 NL

3 OF 7
AD
A107584

FSP93 VERSION 11 REVISION 8 CREATED 06 JUN 66 DATE

MDIR GET93

```
        [SUBROUTINE TO UPDATE SIDELINE SPOT

SPU:            JUMP          *
                MDAR          GRP           [GET ADDRESS OF SPOTS
                MPYL          NPTR
                0
                ARRS          1
                MDAS'F        $NADAT
                ARMD          SDU3
                MDAS'F'N      1             [RESTORE EOL
                ARMD          SDU4
                MDAR'I        SDU4
                MDAR'B'H      C1
                ARMD'I        SDU4

                MDAR'N        LIGHT         [SPOT_LITE OPTION
                ANIR          SPU           [NO, RETURN

                MDAR          GRP           [GET SPOT COUNT
                MDXB'F        1
                JPLS          *+3
                MDAR'N        NSL
                JUMP          *+2
                MDAR'N        GRP
                MDAS'F        1
                ARMD          GCTR
                MDAR'F        SPOT-1        [GET ADDR OF SPOTS
                ARMD          SPTR
SDU1:           MDAR'F        $NADAT        [GET SOURCE ADDR
                MDAS'I'X      SPTR
                ARMD          SDU2

                JPSR          MOVED         [TRANSFER SPOT DATA
SDU2:                         0
SDU3:                         0
                              TWICE
```

```
                MDAR'I          SDU3            [MAKE FIRST P8INT A M8VE
                MDAR'A          M1
                ARMD'I          SDU3
                MDAR            SDU3            [BUMP TRANSFER ADDR
                MDAS            IWIDE
                ARMD            SDU3
                MDAR'X          GCTR            [BUMP C8UNT
                JPLS            SDU1            [GET NEXT SP8T

                MDAR'H          C1              [TURN 8N E8L BIT
                ARMD'I          SDU3
                MDAR'I          SDU4            [LINK SP8TS T8 LINE
                MDAR'A'H        M1              [REM8VE PREVI8US E8L
                ARMD'I          SDU4
                MDIR            SPU

SDU4:                           0


[SUBR8UTINE F8R LINE DATA UPDATE

LDU:            JUMP            *
                JPSR            READ            [READ NEW DATA
                MDAR'N          GRP             [RESET GR8UP C8UNT
                MDAS'F          1
                ARMD            GCTR
                MDAR'F          SCL1            [SET UP GR8UP SCALE
                ARMD            SCLN
                MDAR'F          RBUF            [SETUP CURRENT INPUT GR8UP
                ARMD            CRBUF
                MDAR            WBUF            [SET UP W8RKING GR8UP BUFFER
                ARMD            CDBUF

LDU1:           JPSR            SCLD            [SCALE AND UPDATE GR8UP DATA
SCLN:                           0
CRBUF:                          0
CDBUF:                          0
                                NPTR

                MDAR'X          GCTR            [BUMP GR8UP C8UNT
                JPLS            *+2
                JUMP            LDU2            [END 8F GR8UPS
                MDAR'X          SCLN            [GET NEXT GR8UP SCALE
                MDAR            NPTR
                MDAS            CRBUF           [GET NEXT GR8UP INPUT
                ARMD            CRBUF
                MDAR            NPTR
                MDAS            CDBUF           [GET NEXT LINE GR8UP
                ARMD            CDBUF
                JUMP            LDU1            [SCALE NEXT GR8UP
```

```
LDU2:        MDAR         CLPTR          [BUMP LINE POINTER
             MDAS'F'N     1
             ARMD         CLPTR
             JPAN         *+2            [CHECK LINE BOUND
             JUMP         LDU3           [OK
             ARX0'F'H
             JPLS         *+3            [NOT ZERO
             ARMD         CLPTR          [RESET POINTER TO ZERO
             JUMP         LDU3
             MDAR         LINE
             MDAS'F'N     1
             ARMD         CLPTR

LDU3:        ARMD'0       NEWL           [SET NEW LINE FLAG
             MDAR         NEWL           [WAIT FOR IT TO BE RESET
             JPAN         *-1
             MDAR         DGRP           [GET ADDR OF POP ENTRY
             MDAS         CLPTR
             ARMD         TEMP1
             MDAR'I       TEMP1          [SAVE POP ENTRY
             ARMD         TEMP2
             MDAR         CLPTR          [UPDATE DISPLAY                  POINT:
             ARMD         $CLINE
             MDAR         WBUF           [SWAP ENTIES
             ARMD'I       TEMP1
             MDAR         TEMP2
             ARMD         WBUF
LDU4:        MDAR         DGRP           [REMOVE HIDDEN LINES
             ARMD         RGRP
             JPSR         REMPF
             JPSR         GSPOT
             MDAR         TIME           [UPDATE TIME
             MDAE         FTIME
             JPSR         TIMED
             ARX0'F
             ARMD         WAIT1          [RESET WAIT FLAG
             MDIR         LDU

[SUBROUTINE FOR FREQ BAND UPDATE

FBU:         JUMP         *
             MDAR'N       LINE           [RESET LINE COUNT
             MDAS'F       1
             ARMD         LCTR
             MDAR         WGRP           [GET CURRENT LINE PTR
             MDAS         CLPTR
             ARMD         CWPTR
             MDAR         WGRP           [GET LAST LINE PTR +1
             MDAS         LINE
             ARMD         LPTR
FBU1:        MDAR'I       CWPTR          [GET DATA BUFFER
             ARMD         CWBUF
             JPSR         READ           [INPUT DATA
             JPSR         $FINSH
```

```
MDAR'N       GRP
MDAS'F       1
ARMD         GCTR
MDAR'F       RBUF
ARMD         FRBUF
```

```
                MDAR'F          SCL1
                ARMD            FSCLN
FBU2:           JPSR            SCLD
FSCLN:                          0
FRBUF:                          0
CWBUF:                          0
                                NPTR

                MDAR'X          GCTR
                JPLS            *+2
                JUMP            FBU3
                MDAR'X          FSCLN
                MDAR            FRBUF
                MDAS            NPTR
                ARMD            FRBUF
                MDAR            CWBUF
                MDAS            NPTR
                ARMD            CWBUF
                JUMP            FBU2

FBU3:           MDAR'X          CWPTR           [BUMP BUFFER PTR
                MDX8            LPTR            [END OF BUFFER
                JPLS            *+3             [NO, CONTINUE
                MDAR            WGRP            [YES, RESET POINTER
                ARMD            CWPTR
                MDAR'X          LCTR            [BUMP LINE COUNT
                JPLS            FBU1
                MDAR            WGRP
                ARMD            RGRP
                JPSR            REMOV           [REMOVE HIDDEN LINES
                JPSR            SWITCH
                MDAR'L                          [RESET WORK BUFFER
                MD05            CBLK
                ARMD            WBUF
                MDIR'X          FBU

[SUBROUTINE TO SCALE INPUT DATA

SCLD:           JUMP            *
                MDAR'L                          [RESET MOVE INSTRUCTION
                MDAR'A          M1
                ARMD            SD3

                MDAR'I          SCLD            [GET ADDRESS OF SCALE
                ARMD            SCLA

                MDAR'I'X        SCLD            [GET INPUT BUFFER
                MDAS'F'N        1
                ARMD            IB
```

```
            MDAR'I'X     SCLD        [GET OUTPUT BUFFER
            MDAS'F'N     1
            ARMD         9B
            MDAR'I'X     SCLD        [GET WORD COUNT
            ARMD         TEMP
            MDAR'N'I     TEMP
            MDAS'F       1
            ARMD         LCTR1

SD1:        MDAR'I'X     IB          [SCALE INPUT DATA
            MPYL'I       SCLA
            0
            ARMD         TEMP        [CHECK FOR OVERFLOW
            MDAE'N       YMAX
            JPAN         *+3
            MDAR         YMAX
            JUMP         SD2
            MDAR         TEMP

SD2:        ARRS         12.         [SCALE DATA
            0
            MDAR'A       YMASK       [MASK SCALED DATA
            ARMD         TEMP
            MDAR'N       YMASK       [MASK OUT PREVIOUS VALUE
            MDAR'I'X'A   9B
            MDAS         TEMP        [UPDATE CRNT VALUE
SD3:        0                        [SET DRAW/MOVE BIT
            ARMD'I       9B

            MDAR'L                   [SET DRAW INSTRUCTION
            MDAR'S       C1
            ARMD         SD3

            MDAR'X       LCTR1       [DUMP WORD COUNT
            JPLS         SD1         [AND CONTINUE
            MDIR'X       SCLD        [RETURN

YMAX:       377777777
YMASK:      77776

[SUBROUTINE TO READ NEW DATA

READ:       JUMP         *
            MDAR'K       $SW01       [WAIT FOR NEW DATA
            JPAN         *-1
            MDAR'F       RBUF
            JPSR         GET93
            MDIR         READ
```

```
        [SUBROUTINE TO SWITCH DISPLAY BUFFER

SWITCH:     JUMP        .
            MOAR        $NBUF
            JPAN        .-1             [WAIT IF LAST NEW BUFF NOT HANDLED
            JPSR        MOVED
                        ABLK
                        $GRPO
                        LINE
            MOAR'F      $GRPO
            ARMD        WGRP
            MOAR'F      $GRP1
            ARMD        DGRP
            MOAR'B      ALTB
            ARMD        ALTB
            JPAN        SWIT
            JPSR        MOVED
                        BBLK
                        $GRP1
                        LINE
            MOAR'F      $GRPO
            ARMD        DGRP
            MOAR'F      $GRP1
            ARMD        WGRP
SWIT:       ARMD'B      $NBUF
            JPSR        GSPOT
            MOIR        SWITCH
ALTB:       2525252525

        [SUBROUTINE TO REMOVE HIDDEN LINES

REMOF:      JUMP        .               [SINGLE LINE REMOVEAL ENTRY
            ARMD'B      LOPT            [SET SINGLE LINE OPTION
            JUMP        REM4

REMOV:      JUMP        .               [COMPLETE REMOVAL ENTRY
            ARXO'F                      [CLEAR SINGLE LINE FLAG
            ARMD        LOPT

        [RESTORE DRAW BITS

            MOAR'N      LINE            [RESET LINE COUNT
            MOAS'F      1
            ARMD        LCTR
REM1:       MOAR        RGRP            [GET CURRENT LINE ADDR
            MOAS'N      LCTR
            ARMD        CADR
            MOAR'I      CADR
            ARMD        CADR
            MOAR'N      GRP
            MOAS'F      1
            ARMD        GCTR
```

```
REM2:          MDAR'N         NPTR          [RESET PØINT CØUNT
               MDAS'F         2             [SKIP FIRST WØRD
               ARMD           PCTR
               MDAR'I         CADR
               MDAR'A         M1
               ARMD'I         CADR
REM3:          MDAR'I'X       CADR          [GET DATA WØRD
               MDAR'Ø         C1            [RESTØRE DRAW BIT
               ARMD'I         CADR
               MDAR'X         PCTR          [BUMP PØINT CØUNT
               JPLS           REM3
               MDAR'X         GCTR          [BUMP GRØUP CØUNT
               JPLS           *+2
               JUMP           *+3           [END ØF GRØUP
               MDAR'X         CADR          [BUMP ADDRESS TØ SKIP FIRST PTR
               JUMP           REM2
               MDAR'X         LCTR          [BUMP LINE CØUNT
               JPLS           REM1

[SET UP PØINTER ADDRESS

REM4:          MDAR           CLPTR         [GET CRNT LINE PTR
               ARMD           RPTR          [SET REFERENCE LINE PTR

REM5:          ARMD           TPTR          [RESET TEST LINE PTR
               MDAR           XINC          [GET SPACING IN PØINTS
               ARMD           XØFF          [INITIAL ØFFSET

               ARXØ'F                       [EXTEND SIGN
               MDAS           LDYN
               ARMD           YINC
               ARMD           YØFF

               MDAR           RGRP          [SET UP REFERENCE DATA ADDR
               MDAS           RPTR
               ARMD           RBLK
               MDAR'I         RBLK
               MDAR'A         MADR
               ARMD           RADR

REM6:          MDAR'X         TPTR          [BUMP TPTR MØDULØ LINE
               MDXØ           LINE
               JPLS           *+2
               ARMD           TPTR
               MDAR           CLPTR         [ØNCE ARØUND THE LØØP
               MDXØ           TPTR
               JPLS           REM7          [NØ - PRØCESS LINE
```

```
             MDAR          LØPT          [YES - IT IS SINGLE LINE ØPTIØN
             ANIR          REM9F         [YES - DØNE
             MDAR'X        RPTR          [BUMP RPTR MØDULØ LINE
             MDXØ          LINE
             JPLS          *+2
             ARMD          RPTR
             MDAR          RPTR          [END ØF REFERENCE
             MDAS'F        1
             ARMD          TEMP
             MDXØ          LINE          [MØDULØ LINE
             JPLS          *+2
             ARMD          TEMP
             MDAR          TEMP          [ØNCE ARØUND
             MDXØ          CLPTR
             JPLS          *+2           [NØ - GET NEXT REFERENCE LINE
             MDIR          REMØV         [RETURN
             MDAR          RPTR
             JUMP          REM5

REM7:        MDAR          TPTR          [GET TEST DATA ADDR
             MDAS          RGRP
             ARMD          TBLK
             MDAR'I        TBLK
             MDAR'A        MADR
             ARMD          TADR

             MDAR          XØFF          [GET ABSØLUTE ØFFSET DISTANCE
             JPAN          *+2
             JUMP          *+3
             ARXØ'F
             MDAS'N        XØFF
             MDAS'N        C1
             JPAN          *+2
             JUMP          *+2
             ARXØ'F
             ARMD          TP1
             ARXØ'F
             ARMD          TP2

             MDAR          R1            [CHECK ØFFSET DISTANCE
             MDAS'N        TP1           [WITHIN FIRST GRØUP
             JPAN          *+2           [NØ
             JUMP          REM20         [YES, TØ TEST PØINTS
             MDAR          GRP           [ØNE GRØUP ØPTIØN
             MDXØ'F        1
             JPLS          *+2           [NØ
             JUMP          REM25         [YES, DØNE
             MDAR          R2            [WITHIN FIRST GAP
             MDAS'N        TP1
             JPAN          REM8          [NØ
             MDAS          TP2           [YES, BUMP TP2 PASS GAP
             ARMD          TP2
             MDAR          L1            [RESET TP1
             ARMD          TP1
```

```
REM8:       MDAR        R3          [WITHIN SECØND GRØUP
            MDAS'N      TP1
            JPAN        REM9        [NØ
            MDAR        TP1         [YES, RESET GAP
            MDAS'N      GAP
            MDAS        C1
            ARMD        TP1
            JUMP        REM20       [TØ TEST PØINTS
REM9:       MDAR        GRP         [TWØ GRØUP ØPTIØN
            MDXØ'F      2
            JPLS        .+2         [NØ
            JUMP        REM25       [YES, DØNE
            MDAR        R4          [WITHIN SECØND GAP
            MDAS'N      TP1
            JPAN        REM10       [NØ
            MDAS        TP2         [YES, BUMP TP2 PASS GAP
            ARMD        TP2
            MDAR        L2          [RESET TP1
            ARMD        TP1
            JUMP        REM20       [TØ TEST PØINTS
REM10:      MDAR        R5          [WITHIN THIRD GRØUP
            MDAS'N      TP1
            JPAN        REM25       [YES, DØNE
            MDAR        TP1         [YES, RESET TP1
            MDAS'N      GAP         [DØUBLE GAP
            MDAS'N      GAP
            MDAS        C2
            ARMD        TP1
            JUMP        REM20       [TØ TEST PØINTS

REM11:      MDAR'X      TP1         [BUMP TEST PØINT 1
            MDXØ        L1          [CØMPARE FIRST BREAK PØINT
            JPLS        REM12       [NØ
            MDAR        GRP         [YES, CHECK ØNE GRØUP ØPTIØN
            MDXØ'F      1
            JPLS        .+2         [NØ
            JUMP        REM25       [YES, DØNE
            JPSR        PGAP        [ADVANCE TP2
                        TP2
                        TP1
            JUMP        REM20       [TØ TESET PØINTS
REM12:      MDAR        TP1         [CØMPARE SECØND BREAK PØINT
            MDXØ        L2
            JPLS        REM13       [NØ
            MDAR        GRP         [YES, CHECK TWØ GRØUP ØPTIØN
            MDXØ'F      2
            JPLS        .+2         [NØ
            JUMP        REM25       [YES, DØNE
            JPSR        PGAP        [ADVANCE TP2
                        TP2
                        TP1
            JUMP        REM20       [TØ TEST PØINTS
REM13:      MDAR        TP1         [CØMPARE LAST BREAK PØINT
            MDXØ        L3
```

```
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                           JPLS           *+2              [NO
                           JUMP           REM25            [YES, DONE
```

```
                MDAR'X      TP2         [BUMP TEST POINT 2
                MDXO        L1          [COMPARE FIRST BREAK POINT
                JPLS        REM14       [NO
                MDAR        TP1
                MDAS'N      C1
                ARMD        TP1
                JPSR        PGAP        [ADVANCE TP1
                            TP1
                            TP2
                JUMP        REM20       [TO TEST POINTS
REM14:          MDAR        TP2         [COMPARE SECOND BREAK POINT
                MDXO        L2
                JPLS        REM20       [NO, TO TEST POINTS
                MDAR        TP1
                MDAS'N      C1
                ARMD        TP1
                JPSR        PGAP        [ADVANCE TP1
                            TP1
                            TP2
                JUMP        REM20

[SUBROUTINE TO ADVANCE TEST POINTS PASS GAP

PGAP:           JUMP        .
                MDAR'I      PGAP        [GET ADDR OF TEST POINTS
                ARMD        TEST1
                MDAR'I'X    PGAP
                ARMD        TEST2
                MDAR'I      TEST1       [BUMP PASS GAP
                MDAS        GAP
                ARMD'I      TEST1
                MDAR        L1          [CHECK PASS BREAK POINT
                MDAS'I'N    TEST1
                JPAN        .+2         [YES
                MDIR'X      PGAP        [NO, RETURN
                MDAS        GAP         [CHECK PASS GAP
                JPAN        GAP1        [YES
                MDAS'N      C1          [NO, ADJUST POINTS
                MDAS'I      TEST2
                ARMD'I      TEST2
                MDAR        L1
                ARMD'I      TEST1
                MDIR'X      PGAP
GAP1:           MDAR        L2          [CHECK PASS SECOND BREAK POINT
                MDAS'N'I    TEST1
                JPAN        .+2         [YES
                MDIR'X      PGAP        [NO, RETURN
                MDAS        GAP         [CHECK PASS GAP
                ANIR'X      PGAP        [NO, RETURN
                MDAS'N      C1          [ADJUST TEST POINT
                MDAS'I      TEST2
                ARMD'I      TEST2
                MDAR        L2
                ARMD'I      TEST1
```

MDIRIX PGAP

```
REM20:      MDAR        L3          [CHECK LINE TERMINATION
            MDAS'N      TP1
            JPAN        REM25
            MDAR        L3
            MDAS'N      TP2
            JPAN        REM25

            MDAR        XOFF        [DETERMINE QUADRANT
            JPAN        REM21       [QUADRANT 3
            MDAR        TP1         [QUADRANT 4
            MDAS        TADR        [OFFSET TEST LINE
            ARMD        TEST1
            MDAR        TP2
            JUMP        REM22
REM21:      MDAR        TP2         [OFFSET REFERENCE LINE
            MDAS        TADR
            ARMD        TEST1
            MDAR        TP1
REM22:      MDAS        RADR
            ARMD        TEST2

            MDAR'I      TEST1       [CHECK DRAW BIT
            MDAR'A      C1
            JPLS        .+2         [ON
            JUMP        REM11       [OFF, GET NEXT POINT
            MDAR'I      TEST1       [GET TEST VALUE
            MDAR'A      YMASK
            MDAS'N      YOFF        [ADD OFFSET
            ARMD'H      TDATA       [SAVE IT
            MDAR'I'H    TEST2       [GET REFERENCE VALUE
            MDAR'A'H    YMASK
            MDAE'N      TDATA       [COPMARE VALUE
            JPAN        REM11       [OK, TRY NEXT POINT
            MDAR'I      TEST1       [ELSE, REMOVE POINT
            MDAR'A      M1          [CLEAR DRAW BIT
            ARMD'I      TEST1
            JUMP        REM11       [NEXT POINT

REM25:      MDAR        XOFF        [BUMP OFSET SPACING
            MDAS        XINC
            ARMD        XOFF
            MDAR        YOFF
            MDAS        YINC
            ARMD        YOFF
            MDAR'I      RBLK        [RESET REF ADDR
            MDAR'A      MADR
            ARMD        RADR
            JUMP        REM6        [DO NEXT LINE
```

```
LOPT:        0        ;SINGLE LINE OPTION INDICATOR
CADR:        0        ;CURRENT LINE ADDR
RPTR:        0        ;REFERENCE LINE POINTER
TPTR:        0        ;TEST LINE PTR
XOFF:        0        ;X-OFFSET
YOFF:        0        ;Y-OFFSET
RBLK:        0        ;REFERENCE BLOCK PTR
TBLK:        0        ;TEST BLOCK PTR
RADR:        0        ;REFERENCE DATA ADDR
TADR:        0        ;TEST DATA ADDR
TDATA:       0        ;TEST DATA
NCTR:        0        ;TOTAL POINTS
NREF:        0
XINC:        0
YINC:        0
TP1:         0
TP2:         0
L1:          0
L2:          0
L3:          0
R1:          0
R2:          0
R3:          0
R4:          0
R5:          0
TEST1:       0
TEST2:       0
```

```
[SUBRØUTINE   FØR AXES RØTATIØN

RØT:          JUMP         .
              MDAR         $TVCDC       [READ DIAL C
              ARRS         1            [SCALE FØR +/- 90 DEG IN RAD
              ARMD         TEMP         [SAVE IT
              MDAE'N       LRØT         [DIFFERENCE ØF LAST SETTING
              ARMD         TEMP1
              JPAN         .+2          [GET ABS VALUE
              JUMP         RØTO
              ARXØ'F
              MDAE'N       TEMP1

RØTO:         MDAE'N       DZØNE        [ØFF DEAD ZØNE
              ANIR         RØT          [NØ, RETURN

              MDAR         TEMP         [UPDATE LAST SETTING
              ARMD         LRØT
              ARAR'F'H                  [GET SIN AND CØS
              MDAR'A       MADR
              JPSR         ANGLE
              ARAR'F'N
              MDAR'A       MADR
              ARMD         LDYN
              MDAR'N       LINE         [TRANSFER GRØUP DATA
              MDAS'F       1
              ARMD         LCTR
```

```
R8T1:    MDAR'N     LCTR
         MDAS       DGRP        [GET BL8CK ADDR
         ARMD       LPTR
         MDAR'I     LPTR
         ARMD       IB
         MDAR'N     LCTR        [GET DESTINATI8N BL8CK
         MDAS       WGRP
         ARMD       LPTR
         MDAR'I     LPTR
         ARMD       9B
         MDAR       NPTR        [GET W8RD C8UNT
         MPYL       GRP
         0
         ARRS       1
         ARMD       PCTR
         JPSR       M8VED       [TRANSFER BL8CK
IB:                 0
9B:                 0
                    PCTR
         MDAR'X     LCTR        [BUMP LINE C8UNT
         JPLS       R8T1        [D8 NEXT LINE

         MDAR       WGRP
         ARMD       RGRP
         JPSR       REM8V       [REM8VE HIDDEN LINES
         JPSR       CDXDY       [SET DXDY TABLE
         JPSR       SWITCH      [SWITCH DISPLAY BUFFER
         MDAR'L
         MD05       CBLK        [RESET W8RKING LINE BUFFER
         ARMD       WBUF
         MDIR       R8T

[SUBR8UTINE T8 ADJUST SP8T LIGHT SEARCH

SLADJ:   JUMP       *
         MDAR       GRP         [RESET SP8T C8UNT
         MDAS'F'N   1
         ARX8'F'H
         JPLS       *+3
         MDAR'N     NSL
         JUMP       *+2
         MDAR'N     GRP
         MDAS'F     1
         ARMD       GCTR
         ARMD       TEMP2
         MDAR'F     CS1-1       [ADDR 8F CENTER SP8T
         ARMD       SLAD6
         MDAR'F     LP1-1       [ADDR 8F LEAD P8INT
         ARMD       SLAD7
         MDAR'F     EP1-1       [ADDR 8F END P8INT
         ARMD       SLAD8
         MDAR'F     HARM1-1     [ADDR 8F HARM8NIC GR8UP
         ARMD       SLAD9
```

```
          MDAR'F         $TVCDA     [GET DIAL ADDR
          MDAS'F'N       1
          ARMD           SLAD3
          MDAR'F         SPOT-1     [ADD OF SPOT WORD
          ARMD           SLAD4
          MDAR'F         LSP1-1
          ARMD           SLAD12     [SAVE FWA-1 OF LAST SPOT DIAL VALUE:
          ARXO'F
          ARMD           SLAD13     [RESET NEW DIAL VAL FLAG

5SL:      MDAR'I'X       SLAD3      [GET DIAL READING
          ARRS           1
          ARMD           TEMP1      [SAVE IT
          MDAE'N'I'X     SLAD12     [GET DIFF. WITH LAST TIME
          JPAN           *+2        [GET ABS. VAL OF DIFF
          JUMP           *+2
          ARAR'F'N
          MDAE'N         DZONE      [OFF DEAD ZONE
          JPAN           *+4        [NO, GET NEXT ONE
          ARMD'O         SLAD13     [YES , SET FLAG
          MDAR           TEMP1      [GET DIAL READING
          ARMD'I         SLAD12     [SAVE FOR NEXT TIME
          MDAR'X         GCTR       [BUMP SPOT COUNTER
          JPLS           5SL        [JUMP IF MORE

          MDAR'N         SLAD13     [ELSE CHECK NEW VAL FLAG
          ANIR           SLADJ      [RETURN IF NO UPDATE REQD

          MDAR           TEMP2      [ELSE RESET SPOT COUNTER
          ARMD           GCTR
          MDAR'N         STOG       [TOGGLE
          ARMD           STOG
          MDAR'F         LSP1-1     [GET FWA-1 OF CRNT DIAL VALS
          ARMD           SLAD3      [SAVE IT

SLADO:    MDAR'I'X       SLAD3      [GET DIAL READING
          MDAE           OFSET      [SCALE READING
          ARAR'F'H
          MPYL           NPTR       [COMPUTE NO. OF POINTS
          O
          ARAR'F'H
          MDAR'A         MADR       [MASK LOWER SIGNIFICANCE
          ARMD           TEMP       [SAVE IT

SLAD1:    MDAS'I'X       SLAD7      [ADD LEAD POINT
          ARMD           TEMP1
          MDAS           IWIDE
          ARMD           TEMP2
          MDAS'I'X'N     SLAD8      [CHECK LINE BOUND
          JPAN           *+2
          JUMP           SLAD5
```

```
SLAD2:      MDAR          TEMP1
            ARMD'I'X      SLAD4
            MDAR          IWIDE
            ARRS          1
            MDAS          TEMP1
            ARMD'I'X      SLAD6         [SET CENTERS

            MDAR          HSL           [HARMONIC OPTION
            JPAN          SLAD10
            MDAR'X        GCTR          [END OF GROUP
            JPLS          SLADC         [NO, NEXT
            JPSR          GSPOT
            JPSR          FREQD
            MDAR          $AJXD         [SIDE LINE OPTION
            JSAN          SPU           [UPDATE SIDE LINE SPOTS
            MDIR          SLADJ         [RETURN

SLAD3:      0
SLAD4:      0

SLAD5:      MDAR'I        SLAD8         [GET HARD STOP
            MDAS'N        IWIDE
            ARMD          TEMP1
            JUMP          SLAD2

SLAD6:      0
SLAD7:      0
SLAD8:      0
SLAD9:      0

SLAD10:     MDAR'X        GCTR
            JPLS          .+2
            JUMP          SLAD11
            MDAR          GRP           [SEE IF GROUP=1
            MDXO'F        1
            JPLS          SLADH         [NO, DO HARMONIC
            MDAR          TEMP          [YES, GET DIAL A
            MDAS          IPL           [ADDED FIXED LENGTH
            ARMD          TEMP
            JUMP          SLAD1

SLADH:      MDAR          HC            [COMPUTE (1-H)*NPTR/2
            MDAS'N'I'X    SLAD9
            MPYL          NPTR
            0
            ARRS          11.
                          0
            ARMD          HB
            MDAR          TEMP          [GET DIAL A READING
            MPYL'I        SLAD9         [COMPUTE H*A
            0
            ARRS          10.
            0
            MDAS          HB            [COMPUTE HA+(1-H)NPTR 2
```

```
                JPAN        .+2         [SET TO ZERO IF NEGATIVE
                JUMP        .+2
                ARXOIF
                ARMD        HA
                MDASIN      NPTR        [LIMIT TO NPTR
                JPAN        .+3
                MDAR        NPTR
                JUMP        SLAD1
                MDAR        HA
                JUMP        SLAD1

SLAD11:         JPSR        GSPOT
                JPSR        FREQD
                MDAR        $AUXD       [SIDE LINE OPTION
                JSAN        SPU         [UPDATE SPOTS
                MDIR        SLADJ

SLAD12:         0
SLAD13:         0
HA:             0
HB:             0
HC:             1000
```

```
(SUBRØUTINE TØ MØVE THE SPØTS

GSPØT:      JUMP        .
            MDAR        STØG          (GET TØGGLE
            JPAN        .+3           (JUMP IF WANT 1SPØT SET
            MDAR'F      SPL-1         (ELSE ØSPØT SET
            JUMP        .+2
            MDAR'F      1SPL-1
            ARMD        DPTR          (SAVE DISPLAY PTR
            ARMD        SPLL          (  AND FØR DISPLAY PRØG. ALSØ
            MDAR'N      LINE          (RESET LINE CØUNT
            MDAS'F      1
            ARMD        LCTR
            MDAR        DGRP          (GET LINE DATA ADDR
            MDAS        CLPTR
            ARMD        GSP5
            MDAR        DGRP          (GET ADDR ØF LAST LINE
            MDAS        LINE
            ARMD        LPTR
GSP0:       MDAR'F      SPØT-1        (GET SPØT PØINTER
            ARMD        SPTR
            MDAR'N      NSPØT         (GET SPØT CØUNT
            MDAS'F      1
            ARMD        GCTR
            MDAR'I'X    DPTR          (SET UP DISPLAY ADDR
GSP1:       ARMD        GSP3
            MDAR'I      GSP5          (SET UP SPØT DATA
            MDAS'I'X    SPTR
            ARMD        GSP2
            JPSR        MØVED         (XFER SPØT DATA
GSP2:                   0
GSP3:                   0
                        IWIDE
            MDAR'I      GSP3          (MAKE 1ST WØRD A MØVE
            MDAR'A      M1
            ARMD'I      GSP3
            MDAR'X      GCTR          (BUMP CØUNT
            JPLS        .+2
            JUMP        GSP4          (DØNE
            MDAR        GSP3          (BUMP TRANSFER ADDR
            MDAS        IWIDE
            JUMP        GSP1

GSP4:       MDAR        GSP3          (SET EØL
            MDAS        IWIDE
            MDAS'F'N    1
            ARMD        TEMP
            MDAR'I      TEMP
            MDAR'Ø'H    C1
            ARMD'I      TEMP
```

```
                MDAR'X          LCTR            [BUMP LINE COUNT
                JPLS            .+4
                MDAR            SPLL            [STORE ADDR OF SPOT DISPLAY LIST
                ARMD            SPLP
                MDIR            GSPOT

                MDAR'X          GSP5            [BUMP LINE PTR
                MDXB            LPTR
                JPLS            GSP0
                MDAR            DGRP            [WRAP AROUND
                ARMD            GSP5
                JUMP            GSP0

GSP5:           0

[SUBROUTINE TO ADJUST AMPLITUDE SCALING

SCADJ:          JUMP            .

                ARMD'B          DONT            [CLEAR DON'T FLAG

                MDAR'N          GRP             [RESET LINE COUNT
                MDAS'F          1
                ARMD            GCTR
                MDAR'F          $TVCDD          [GET CONTROL DIAL ADDR
                MDAS'F'N        1
                ARMD            SCA
                MDAR'F          SCL1-1          [ADDR OF SCALES
                ARMD            SCLN
                MDAR'F          LSC1-1          [ADDR OF PREVIOUS SCALE
                ARMD            LSCN

SCAD1:          MDAR'X          SCLN            [BUMP ADDR OF SCALES
                MDAR'I'X        SCA             [READ CONTROL DIAL
                ARRS            1
                ARMD            TEMP            [SAVE IT
                MDAE'N'I'X      LSCN            [GET DIFFERENCE
                ARMD            TEMP1           [GET ABS VALUE
                JPAN            .+2
                JUMP            SCAD2
                ARXB'F
                MDAE'N          TEMP1
SCAD2:          MDAE'N          DZONE           [OFF DEAD ZONE
                JPAN            SCAD3           [NO
                ARXB'F                          [YES, SET DOIT FLAG
                ARMD            DONT
                MDAR            TEMP            [UPDATE PAST SCALE
                ARMD'I          LSCN
                MDAE            OFSET           [BIAS DIAL READING
                ARAR'F'H
                MDAR'A          MADR
                ARMD'I          SCLN            [SAVE SCALE
```

```
SCAD3:    MDAR'X     GCTR       [NEXT GROUP
          JPLS       SCAD1

          MDAR       DONT       [COMPARE PREVIOUS VALUE
          MDXO       SCAD6
          JPLS       .+2        [SEND IF DIFFERENT
          JUMP       SCAD4      [NO DIFFERENT

          MDAR       $SW01      [SEND DONT FLAG
          ARMD       A93C0
          JPSR       $ROWFW
                     -0
                     A93C0
                     DONT
                     1

SCAD4:    MDAR       DONT       [UPDATE PASS VALUE
          ARMD       SCAD6
          JPSR       $FINSH
          MDAR       DONT
          ANIR'X     SCADJ

SCAD5:    JPSR       FBJ        [SCALE AND UPDATE DATA
                     0
          MDIR'X     SCADJ

SCAD6:    0


ICHTY:    0          [INPUT 8 BIT CODE FROM TTY

          MDAR'I     ICHTY      [GET INP-MODE CONTROL CODE
          ARMD       .+6
          MDAR'F     TTYIB
          ARMD       TTYSR
          ARXO'F
          ARMD       TTYC
          JPSR       TTWT
                     0
          MDAR       TTYC
          JUMP'I'X   ICHTY

TTYIB:    JUMP       .
          ARMD'L
TTYCC:               0
          MDAR       TTYC
          ARRS       1

          MDAR'O'K   C2
          SKLA       1
          MDXO'K     C2
          ARMD       TTYC
          MDAR       TTYCC
          MDIR       TTYIB
```

```
TTWT:          JUMP          0

               MDIR'A        9FTTY
               MDAR'F        TT83
               ARMD          TPVT2
               MDAR'F        TTY3
               ARMD          TPVT1
               MDAR          S39VF
               ARMD          9VFPV
               MDAR          S3A
               MDIC'I'8      TTWT
               MDIR          WT1

TT83:          JUMP          .
               JPSR'I        TTY3R
               MDIC'L'A
9FTTY:TPT9F:   TTY8F
               ARMD          TTYCC
               MDAR'F        N8
               ARMD          WT1+2
               MDAR'F        WT1
               FPRI
               ARMD'I        LOP
               MDAR'F        WT1+2
               ARMD          LOP
               JPRI
               PINT
               MDAR          TTYCC
               JUMP'I        TT83

S3A:           0
S39VF:         0
TTYC:          0

TTY3:          0

               JPSR'I        TTY3R
               JUMP'I        TTY3

TTY8R:         0


ENT:           JUMP          0
               ARMD'L
ENTA:          0
               MDAR          9VFPV
               ARMD'L
ENT8:          0
               FPRI
               MDAR'I        ENT
               ARMD          PINPV
               MDX8'F        N8
               JPLS          .+3
```

```
                MDAR'F          PINPV
                ARMD            LGP

                UPRI
                ARXB'F
                ARMD'I'X        ENT
                MDIR'X          ENT

EXT:            JUMP'I          0
                MDAR            ENT9
                ARMD            9VFPV
                MDAR            ENTA
                PINT
                JUMP'I          EXT
LGP:                            PINPV

XT1:            JUMP            *
                UPSR            ENT
                                0
                                0
                MDAR            ENT9
                ARMD            S39VF
                MDAR            ENTA
                ARMD            S3A
                ARXB'F
                ARMD            ENT9
                ARMD            ENTA
                ARMD            9VFPV
                PINT
                JUMP'I'X        TTWT

C9NT:           0
LSCN:           0
LSC1:           0
LSC2:           0
LSC3:           0
DZ9NE:          3700000
LR9T:           0
MSKSW:          77777700
```

```
[PARAMETER INPUT LIST

IPL:          0            [FIXED SPØTLITE INTERVAL
LINE:         10.          [NUMBER ØF SPECTRUM LINES
GRP:          1            [NUMBER ØF HARMØNIC GRØUPS
NPTR:         150.         [NUMBER ØFPØINT PER LINE
NSL:          1            [NUMBER ØF SPØT LIGHTS
TIMEO:        4000.        [STARTING TIME IN SECØNDS
FTIME:        32.          [FFT UPDATE TIME IN SECØNDS
RESØ:         1000         [FREQ RESØLUTIØN
ST1:          0            [START ØF GRØUP 1
ST2:          0            [START ØF GRØUP 2
ST3:          0            [START ØF GRØUP 3
HARM1:        1            [HARMØNIC FACTØR
HARM2:        1
IWIDE:        10.
NFRAM:        18.
NSHUT:        0
INTL:         0
INTS:         0
INTSL:        0
INTLØ:        0
INTX:         100
XGAP:         1400

[PARAMETER ØUTPUT LIST

LIGHT:        -0           [SPØT LIGHT ØPTIØN
HSL:          0            [HARMØNIC RELATED SPØT ØPTIØN
FUNCT:        0

[LØCAL PARAMETERS

C1:           1
X0:           67776        [2 1/2 INCH X AXES ØFFSET
Y0:           0            [NØ Y AXES ØFFSET
DELX:         100          [.039 INCH FØR SIDE LINE DISPLAY
SX0Y0:        7600010000   [SIDE LINE DISPLAY ØRIGIN
MADR:         77777        [ADDRESS MASK
C18:          22
M35:          -35.
M2:           -2
C9:           9.
C13:          13.
C40:          40
C6:           6
ØFSET:        2000000000   [SPØTLIGHT DIAL ØFFSET
C0:           0
C2:           2
C3:           3
C4:           4
C5:           5
```

```
M0611:          7700777777
M1217:          7777007777
M1823:          7777770077
M2429:          7777777700
M1629:          37777
M1:             -1
C1M1:           100001
C16200:         16200
C17:            17.


[LØCAL VARIABLES

WCTR:           0               [WØRD CØUNT
LCTR:           0               [RUNNING LINE CØUNT
ALINE:          0               [CURRENT A BLØCK PTR
BLINE:          0               [CURRENT B BLØCK PTR
GCTR:           0               [RUNNING GRØUP CØUNT
XSP:            0               [INITIAL DISPLAY ØRDINATES
PCTR:           0               [RUNNING PT CØUNT
SBA:            0               [DXDY TABLE PTR
LDXN:           0               [INCREMENTAL DX VALUE
LDYN:           0               [ DITTØ DY
VDXY:           0               [CURRENT DXDY VALUE
TEMP:           0
TEMP1:          0
TEMP2:          0
DBA:            0               [DESTINATIØN ADDR PTR
TIME:           0               [UPDATE TIME
INTGT:          0               [INTEGER VALUE TØ BE CØNVERTEED
FCN:            0               [  STATUS
SCTR:           0               [  CØUNT
SPTR:           0
CS1:            0               [CENTER SPØTLIGHT PØINT
CS2:            0
CS3:            0
CF1:            0               [CENTER SPØT FREQ
CF2:            0
CF3:            0
EP1:            0
EP2:            0
EP3:            0
LP1:            0
LP2:            0
LP3:            0
WAIT1:          0
NEWL:           0
```

```
RBUF:           LØC(.+150.)     [INPUT DATA BUFFER

SCL1:           400             [GRØUP 1 SCALE
SCL2:           400             [      2
SCL3:           400             [      3
SCLA:           0
DTXY:           0
WDXY:           0
LDXDY:          LØC(.+16.)
TDXDY:          LØC(.+16.)
CWPTR:          0               [WØRKING  BUFFER ADDR

NPAR:           0
TSFLG:          0
T1:0; T2:0; T3:0; T4:0; T5:0; T6:0; T7:0; T8:0

RGRP:           0               [BUFFER ADDR FØR LINE REMØVAL
WGRP:           0               [WØRK GRØUP
DGRP:           0               [DISPLAY GRØUP

LSP1:           0
LSP2:           0
LSP3:           0

SPLL:           0
SPLP:           0
STØG:           0
CTØG:           0

1SPL:           MDC5            1S1
                MDC5            1S2
                MDC5            1S3
                MDC5            1S4
                MDC5            1S5
                MDC5            1S6
                MDC5            1S7
                MDC5            1S8
                MDC5            1S9
                MDC5            1S10
SPL:            MDC5            S1
                MDC5            S2
                MDC5            S3
                MDC5            S4
                MDC5            S5
                MDC5            S6
                MDC5            S7
                MDC5            S8
                MDC5            S9
                MDC5            S10
```

```
1S1:        LOC(.+30.)
1S2:        LOC(.+30.)
1S3:        LOC(.+30.)
1S4:        LOC(.+30.)
1S5:        LOC(.+30.)
1S6:        LOC(.+30.)
1S7:        LOC(.+30.)
1S8:        LOC(.+30.)
1S9:        LOC(.+30.)
1S10:       LOC(.+30.)

S1:         LOC(.+30.)
S2:         LOC(.+30.)
S3:         LOC(.+30.)
S4:         LOC(.+30.)
S5:         LOC(.+30.)
S6:         LOC(.+30.)
S7:         LOC(.+30.)
S8:         LOC(.+30.)
S9:         LOC(.+30.)
S10:        LOC(.+30.)

DPTR:       0
SPOT:       LOC(.+3)
NSPOT:      0
GAP:        0
CLPTR:      0
CP1:        0
INTG:       0
SCA:        0
LPTR:       0
BIAS:       0
LCTR1:      0
FCT:        0
SBUF:       LOC(.+36.)
PICS:       0
STARF:      0
A9300:      0
```

```
[DISPLAY BUFFER PTRS

CAPTR:          0               [CURRENT INPUT BUFFER PØINTER
ABLK:           MD05            ABLK1
                MD05            ABLK2
                MD05            ABLK3
                MD05            ABLK4
                MD05            ABLK5
                MD05            ABLK6
                MD05            ABLK7
                MD05            ABLK8
                MD05            ABLK9
                MD05            ABLK10

CBPTR:          0                               [CURRENT INPUT BUFFER PØINTER
BBLK:           MD05            BBLK1
                MD05            BBLK2
                MD05            BBLK3
                MD05            BBLK4
                MD05            BBLK5
                MD05            BBLK6
                MD05            BBLK7
                MD05            BBLK8
                MD05            BBLK9
                MD05            BBLK10

WBUF:           MD05            CBLK            [WØRKING BUFFER PØNTER

CBLK:           LØC(.+150.)

DBLK:           DBLK1
N8:             JUMP            .
                MDIR            N8

TERMINATE
```

```
EXPUNGE

TITLE TWDIS

[DISPLAY SUBROUTINE FOR ESP
[VERSION 2, REVISION C
[1/31/75

NOCARRET
ENTRY DISPL,
CHARS,ECHAR,
LALX,LA20,LA30,
EOLL,LL5,LL20,LL50,LL70,
EOLS,LS5,LS50,
EOLT,LT5,
FCLH,FC5,FC10,FC30,FC80,FC90,
EOLX,LX5,END2,
AVGON,LCNT,SFLG,LGRP,GRP0,GRP1,LASTL,LPTR,NLINE,
GEND,PXY,TDAT,TDAT1,HOUR1,HOUR2,MIN1,MIN2,SEC1,SEC2,
F1L1,F1R1,F2L1,F2R1,F3L1,F3R1,S1A,S2A,S3A,S4A,S5A,S6A,
S7A,S8A,S9A,S10A,S11A,S12A,S13A,S14A,S15A,S16A,F1A,F2A,
NSPOT,DDUN,TEMP1,TEMP2,TEMP3,
SCALE,NADAT,CLINE,
F2L3,F3R2,S5B,S12B,F3R4,F1L3,F1B,S6B,F3L2,S13B,S15B,
F2R3,F2B,S7B,F2L2,S10B,S2B,S14B,F3R3,S8B,F1L2,S3B,
S11B,CLINE,F3L3,F2R2,S9B,S4B,S16B,F2R4,S1B,
TCNT,NBUF,AUXD,NDXDY,DCNT,FNS,LFNS;
CARRET
[SYMBOL DEFINITIONS

EOLPV=77757; EOVPV=77756;  EOSPV=77736;  EONPV=77735;  FCLPV=77755

MDC5=25000VH; MDC6=26000VH; MDC7=27000VH; MD10=30000VH; MD11=31000VH

[FOLLOWING GENERATES VALUES (ASCII) FOR THE SYMBOLS: A.,B.,,,,Y.,Z.
[FOR USE IN CALLS TO P MACRO

ZZZ=101
IREPEAT ZZ,(A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,U,V,W,X,Y,Z)
ZZ\.=ZZZ
ZZZ=ZZZ+1
ENDI
P.=120

[P MACRO FOR BUILDING DISPLAY WORDS FOR THE CHAR. GENERATOR

MACRO1 P(A1,A2,A3,A4,A5)
A1VBVK + A2VB + A5VBVK + A3VBVK + A4VB + 0
ENDM
```

```
[LFCR MACRO TO BUILD LINE FEED AND CARRIAGE RETURN WORD FOR TEXT

MACRO1 LFCR
P(12,15,0,0)
ENDM


DISPL:          JUMP            .               [REFRESH STARTER ROUTINE

                MD11            SCALE           [SET SCALE

                MDIC'A          M10             [TURN OFF LCG
                MD10            AVGON           [TURN ON AVG, SCOPE AND CLOCK

                MDAR'N          AUXD            [SEE IF NON-AVGD CRNT LINE DISPLAY
                JPAN            DIS10           [JUMP IF NOT TO BE DRAWN

                MDAR'F          EOLX            [ELSE SPECIFY EOL HANDLER FOR IT
                ARMD            EOLPV

                MDAR'L                          [LOAD EOV PIVOT
                MDC5            NADAT
                ARMD            EOVPV
                MDC7            NDXDY           [SET DXDY
                MDC6            $INTSL          [SET INTENSITY

                JUMP            DIS20

DIS10:          MDC6            $INTLO
                JPSR            LALX            [GO SET UP FOR LINES DWG

                MDC7'I          PXY             [SET DXDY FOR 1ST LINE

DIS20:
                MDAR'N          $PICS           [TAKING MOVIES?
                JPAN            DIS60           [NO, GO START REFRESH

                MDAR            NSHUT           [YES, GET NO OF REFRESHES SHUTTER
                                                [  HAS BEEN OPEN
                JPLS            .+2             [JUMP IF ALREADY AT LEAST ONE
                JUMP            DIS40           [ELSE THIS JUMP

                MDXO            $NSHUT          [OPEN REQD NO OF TIMES YET?
                JPLS            DIS50           [NO, LEAVE OPEN AGAIN

                MDIC'A          M1000           [YES, CLOSE SHUTTER
                S4AR'F                          [WAIT TILL CLOSED
                MDAR'F'A        1000
                JPLS            .-2

                ARXO'F                          [WAIT FOR SURE
                ARMD'L
```

0

```
                MDAR'X          .-1
                MDX0'F          3720
                JPLS            .-2
                ARX0'F                          [RESET NO. OF TIMES OPEN COUNTER
                ARMD            NSHUT
                MDAR            NFRAM           [COMPARE FRAMES DONE
                MDX0            $NFRAM          [ WITH NO. REQD
                JPLS            DIS40           [JUMP IF MORE FRAMES REQD

                ARMD            NFRAM           [ELSE RESET FRAMES DONE COUNT
                ARMD            $PICS           [ AND MOVIES REQD FLAG
                JUMP            DIS60           [AND GO START REFRESH

DIS40:          MDAR'X          NFRAM           [BUMP NO OF FRAMES DONE
                MDIC'0          C1000           [OPEN THE SHUTTER
                S4AR'F                          [ WAIT TILL IT IS
                MDAR'F'A        1000
                JPLS            .+2
                JUMP            .-3
                ARX0'F                          [WAIT 20MSEC TO BE SURE
                ARMD'L
                0
                MDAR'X          .-1
                MDX0'F          3720
                JPLS            .-2

DIS50:          MDAR'X          NSHUT           [BUMP SHUTTER OPEN COUNT

DIS60:
                MDIR            EOVPV           [START DWG.

                MDIR            DISPL           [RETURN


LALX:           JUMP            .               [ROUTINE TO SET UP FOR LINES DWG.

                ARX0'F
                ARMD            LCNT            [RESET COUNT OF LINES DRAWN

                MDAR'N          SFLG            [GET SPOTLITES REQD FLAG
                JPAN            .+2             [JUMP IF NO SPOTS
                MDO6            $INTL           [ELSE SET INT. FOR LINES WITH SP

                MDAR'F          EOLL            [SPECIFY EOL HANDLER FOR LINES
                ARMD            EOLPV

                MDAR            $DTXY
                ARMD            PXY             [SAVE PTR TO DXDY TABLE

                MDAR            LGRP            [SEE WHICH LINE GROUP TO DRAW
                JPAN            LA20            [JUMP IF GROUP 1
```

```
                MDAR'F          GRPO            [ELSE GRØUP O, GET DISPLAY LIST FW
                MDAS            LASTL           [ADD NØ. ØF LAST RECD LIND
                ARMD            LPTR            [SAVE PTR TØ LAST RECD'S LIST ENTR

                MDAR'F          GRPO            [GET DISPLAY LIST FWA AGAIN
                JUMP            LA30            [GØ ØN WITH CØDING CØMMØN TØ BØTH

LA20:           MDAR'F          GRP1            [GET GRØUP 1 DISPLAY LIST FWA
                MDAS            LASTL
                ARMD            LPTR            [SAVE PTR TØ LAST RECD LINE'S LIST

                MDAR'F          GRP1            [GET FWA ØF DISPLAY LIST AGAIN
LA30:           MDAS            NLINE           [ADD NØ. ØF LINES TØ DRAW
                ARMD            GEND            [SAVE ADDRESS ØF LØCATIØN LIST END

                MDAR'I          LPTR            [LØAD EØV PIVØT FØR 1ST LINE
                ARMD            EØVPV

                MDIR            LALX            [RETURN



EØLX:           JUMP            .               [EØL HANDLER FØR NØN-AVGD LINE DRA

                ARMD'L                          [SAVE AR
LX5:            O

                MDO6            $INTLØ          [SET INT. FØR LINES W/Ø SPØTS
                JPSR            LALX            [SET JP TØ DRAW LINES NEXT

                MDAR            LX5             [RESTØRE AR

                MDO7'I          PXY             [SET DXDY FØR 1ST LINE

                MDIR            EØVPV           [START LINE DWG

                JUMP'I          EØLX            [CLEAR AND RETURN



EØLL:           JUMP            .               [EØL HANDLER FØR LINES

                ARMD'L                          [SAVE AR
LL5:            O

                MDAR'X          LCNT            [BUMP CØUNT ØF LINES DRAWN
                MDXØ            NLINE           [CØMPARE WITH NØ. TØ DRAW
                JPLS            .+2             [THIS JUMP IF MØRE TØ DRAW
                JUMP            LL50            [ELSE THIS JUMP , ALL DRAWN
```

```
                MDAR'X          LPTR            [GET NEXT DISPLAY LIST ADDRESS
                MDXØ            GEND            [SEE IF BEYØND LIST END
                JPLS            LL2C            [ISN'T, CØNTINUE

                MDAR            LGRP            [ELSE CHECK GRØUP'S ID
                JPAN            *+3             [JUMP IF GRP 1
                MDAR'F          GRPO            [GET FWA ØF GRP O DISPLAY LIST
                JUMP            *+2
                MDAR'F          GRP1            [GET FWA ØF GRP 1 DISPLAY LIST

                ARMD            LPTR            [SAVE PTR TØ GRØUPS DISPLAY LIST
      LL20:     MDO7'I'X        PXY             [SET DXDY FØR NEXT LINE

                MDAR'I          LPTR            [LØAD EØV PIVØT FØR NEXT LINE
                ARMD            EØVPV

                MDAR            LL5             [RESTØRE AR
                MDIR            EØVPV           [START LINE DRAW
                JUMP'I          EØLL            [CLEAR AND RETURN


      LL50:     MDAR            SFLG            [HERE IF LINES ALL DRAWN
                JPAN            LL7C            [JUMP IF TØ DRAW SPØTLITES

                MD1C'A          MC429           [ELSE TURN ØFF AVG
                MDAR'F          EØLT            [SPECIFY EØS HANDLER FØR TEXT
                ARMD            EØSPV

                MDAR'F          TDAT-1          [LØAD EØW PIVØT FØR TEXT DRAW
                ARMD            EØWPV

                MDAR'N          $TSFLG
                JPAN            *+3             [JUMP IF NØT DWG TEXT INPUT LINE

                MDAR'F          TDAT1-1         [RELØAD EØW PIVØT
                ARMD            EØWPV

                MDAR            LL5             [RESTØRE AR

                MDIC'Ø          C1C             [START TEXT DISPLAY

                JUMP'I          EØLL            [CLEAR AND RETURN

      LL70:     ARXØ'F                          [HERE IF TØ DRAW SPØTLITES
                ARMD            LCNT            [RESET LINES DRAWN CØUNT

                MDO6            $INTS           [SET INT. FØR SPØTS

                MDAR'F          EØLS            [SPECIFY EØL HANDLER FØR SPØTS
                ARMD            EØLPV

                MDAR            $DTXY
                ARMD            PXY             [SAVE PTR TØ DXDY TABLE
```

```
              MDAR         $SPLP
              ARMD         LPTR          [SAVE PTR TO SPOTS DISPLAY LIST
              MD07'I       PXY           [SET DXDY FOR 1ST SPOT

              MDAR'I'X     LPTR          [SET EOV PIVOT FOR 1ST SPOT
              ARMD         EOVPV

              MDAR         LL5           [RESTORE AR

              MDIR         EOVPV         [START SPOT DRAW

              JUMP'I       EOLL          [CLEAR AND RETURN



EOLS:         JUMP         .             [EOL HANDLER FOR SPOTLITES

              ARMD'L                     [SAVE AR
LS5:          0

              MDAR'X       LCNT          [BUMP COUNT OF LINES DONE
              MDXO         NLINE         [COMPARE WITH NO. TO DO
              JPLS         LS50          [JUMP IF MORE YET

              MDAR'F       EOLT          [ELSE SPOTS DONE, SPECIFY EOS
              ARMD         EOSPV         [  HANDLER FOR TEXT DRAW

              MD10'A       MO429         [TURN OFF AVG

              MDAR'F       TDAT-1        [LOAD EOW PIVOT FOR TEXT DRAW
              ARMD         EOWPV
              MDAR'N       $TSFLG
              JPAN         .+3           [JUMP IF NOT DWG TEXT INPUT LINE

              MDAR'F       TDAT1-1       [RELOAD EOW PIVOT
              ARMD         EOWPV

              MDAR         LS5           [RESTORE AR,BR

              MDIC'O       C10           [START TEXT DWG
              JUMP'I       EOLS          [CLEAR AND RETURN

LS50:         MDC7'I'X     PXY           [SET DXDY FOR NEXT SPOT
              MDAR'I'X     LPTR          [LOAD EOV PIVOT FOR NEXT SPOTS
              ARMD         EOVPV

              MDAR         LS5           [RESTORE AR

              MDIR         EOVPV         [START NEXT SPOT DWG

              JUMP'I       EOLS          [CLEAR AND RETURN
```

```
     EOLT:      JUMP           .              [TEXT EOS HANDLER

                ARMD'L                        [SAVE AR
     LT5:       0

                ARMD'O         DDUN           [SET DWG DONE FLAG

                MDAR           LT5            [RESTORE AR

                JUMP'I         EOLT           [CLEAR AND RETURN


     FCLH:      JUMP           .              [FRAME CLOCK HANDLER

                ARMD'L                        [SAVE AR,BR
     FC5:       0
                BRMD'L
     FC10:      0

     FC30:      MDAR           TCNT           [GET CLOCK TICK COUNT
                MDAS'F         1              [BUMP IT
                ARMD           TCNT
                JPAN           FC90           [JUMP IF NOT TIME TO REFRESH
                MDAR           $WAIT1         [CHECK NEW LINE WAIT FLAG
                JPAN           FC90           [JUMP IF SET, DONT REFRESH

                MDAR'N         DDUN           [ELSE GET DRAWING DONE FLAG
                JPAN           FC90           [JUMP IF NOT DONE

                JPSR           $TRVCD         [ELSE GO SAMPLE DIALS AND SWITCHES
                MDIC'O'H       C40
                S5BR'F
                MDBR'A         M0015
                MDIC'A'H       M40
                S5AR'F'H
                MDAR'A         C7
                ARLS           12.
                0
                BRAR'F'O
                ARRS           6              [MATCH 9300 WORD LENGTH
                ARMD           FNS            [SAVE SWITCHES
                MDXO           LFNS           [DETECT CHANGES OF STATUS
                MDAR'A         FNS            [SAVE TOGGLE STATUS
                MDXO           $FUNCT         [LATCH STATUS
                ARMD           $FUNCT         [SAVE LATCHED STATUS
                MDAR           FNS            [UPDATE PREVIOUS STATUS
                ARMD           LFNS
```

```
        MDAR'N     $NEWL      [GET NEW LINE FLAG
        JPAN       .+4        [JUMP IF NOT SET
        ARMD       $NEWL      [ESLE RESET IT
        ARMD'B     $WAIT1     [  AND SET WAIT FLAG
        JUMP       FC90       [  AND DONT DISPLAY, DONT RESET
                              [      DWG DONE FLAG OR TICK COU

        MDAR       M2         [RESET TICK COUNT
        ARMD       TCNT
        ARXB'F
        ARMD       DDUN       [RESET DRAW DONE FLAG

        MDAR'N     NBUF       [GET NEW BUFFER READY FLAG
        JPAN       FC80       [JUMP IF NOT READY

        ARMD       NBUF       [ELSE RESET NEW BUFFER FLAG

        MDAR'N     LGRP       [AND TOGGLE GROUP SPECIFIER
        ARMD       LGRP
FC80:   JPSR       DISPL      [GO START REFRESH
FC90:   MDAR       FC5        [RESTORE AR,BR
        MDBR       FC10

        JUMP'I     FCLH       [CLEAR AND RETURN



[CONSTANTS

AVGON:  61400VH    [AVG, SCOPE AND CLOCK ON
C0:     0
C1:     1
C10:    10
C40:    40
C7:     7
HINT:   17777      [MAX INTENSITY
M0015:  77777VH
M0429:  3777777777
M1:     -1
M10:    -10
M11:    -11
M1629:  37777
M2:     -2
M40:    -40
M1000:  -1000
C1000:  1000
```

```
[VARIABLES

AUXD:       0               [NON-AVGD LINE DRAW DESIRED FLAG
DCNT:       0               [CLOCK TICK COUNT FOR DIALS
DDUN:       0               [REFRESH DONE FLAG
FNS:        0               [SWITCH STATUS HOLDER
LFNS:       0               [PREVIOUS SWITCH STATUS
GEND:       0               [ADDRESS OF DISPLAY LIST + 1
GRP0:       LOC (.+16.)     [LINE GROUP 0 DISPLAY LIST
GRP1:       LOC (.+16.)     [LINE GROUP 1 DISPLAY LIST
CLINE:
LASTL:      0               [ID NO. OF LAST LINE RECD
LCNT:       0               [COUNT OF LINES DRAWN
LGRP:       0               [CURRENT LINE GROUP IDENTIFIER
LPTR:       0               [PTR INTO DISPLAY LIST
NADAT:      LOC (.+180.)    [SIDE LINE DISPLAY BUFFER PLUS SPOTS
            1VH             [EOL FOR SIDE LINE WITH SPOTS
NBUF:       0               [NEW BUFFER READY FLAG
NDXDY:      0               [DXDY VALUE FOR NON-AVGD LINE DISPLAY
NLINE:      0               [NO. OF LINES TO DRAW
NSPOT:      0               [NO. OF SPOTS PER LINE
PXY:        0               [PTR TO LDXDY TABLE
SCALE:      0               [PICTURE SCALE FACTOR
SFLG:       0               [SPOTLITES REQD FLAG
TCNT:       -2              [TICK COUNT FOR REFRESH PURPOSES
TEMP1:      0
TEMP2:      0
LCTR:       0
TEMP3:      0
NSHUT:      0
NFRAM:      0

[TEXT DISPLAY BUFFER

TDAT1:      P(11,16.,13,102.)            [INPUT TEXT LINE BUFFER
CHARS:      LOC(.+19.)
ECHAR:      0

TDAT:       P(11,16.,13,24.); P(22,37,0,0)           [HEADER

HOUR1: 0;  HOUR2: 0;  100                 [TIME
MIN1:  0;  MIN2:  0;  100
SEC1:  0;  SEC2:  0;  LFCR

F1L1: 0;  F1L2: 0;  F1L3: 0;  134              [FREQ 1
F1R1: 0;  F1R2: 0;  F1R3: 0; F1R4: 0; LFCR

F2L1: 0;  F2L2: 0;  F2L3: 0;  134              [FREQ 2
F2R1: 0;  F2R2: 0;  F2R3: 0;  F2R4: 0;  LFCR

F3L1: 0;  F3L2: 0;  F3L3: 0;  134              [FREQ 3
F3R1: 0;  F3R2: 0;  F3R3: 0;  F3R4: 0;  LFCR
```

```
S1A: 0;   S1B: 0;   LFCR        [SWITCH 1
S2A: 0;   S2B: 0;   LFCR        [SWITCH 2
S3A: 0;   S3B: 0;   LFCR        [  ETC
S4A: 0;   S4B: 0;   LFCR
S5A: 0;   S5B: 0;   LFCR
S6A: 0;   S6B: 0;   LFCR
S7A: 0;   S7B: 0;   LFCR
S8A: 0;   S8B: 0;   LFCR
S9A: 0;   S9B: 0;   LFCR
S10A: 0;   S10B: 0;   LFCR
S11A: 0;   S11B: 0;   LFCR
S12A: 0;   S12B: 0;   LFCR
S13A: 0;   S13B: 0;   LFCR
S14A: 0;   S14B: 0;   LFCR
S15A: 0;   S15B: 0;   LFCR
S16A: 0;   S16B: 0;   LFCR
F1A: 0;   F1B: 0;   LFCR
F2A: 0;   F2B: 0
END1:               0
END2:               P(11,64.,13,64.,1)

VAX:                20000
                    1VH 1

TERMINATE
```

11.3	FC90	10.25	S14B	12.16
10.41	FCLH	7.16	S15A	12.17
10.42	FNS	11.6	S15B	12.17
10.44	GEND	11.10	S16A	12.20
10.61	GRP0	11.11	S16B	12.20
10.43	GRP1	11.12	S1A	12.1
10.45	HINT	10.47	S1B	12.1
10.46	HOUR1	11.51	S2A	12.2
11.44	HOUR2	11.51	S2B	12.2
11.13	LA20	4.10	S3A	12.3
11.4	LA30	4.15	S3B	12.3
11.5	LALX	3.43	S4A	12.4
2.12	LASTL	11.14	S4B	12.4
2.37	LCNT	11.15	S5A	12.5
2.44	LCTR	11.34	S5B	12.5
3.16	LFNS	11.7	S6A	12.6
3.33	LGRP	11.16	S6B	12.6
3.35	LL20	5.14	S7A	12.7
11.45	LL5	4.55	S7B	12.7
12.23	LL50	5.26	S8A	12.10
12.24	LL70	5.54	S8B	12.10
4.52	LPTR	11.17	S9A	12.11
6.22	LS5	6.25	S9B	12.11
7.1	LS50	6.56	SCALE	11.27
4.30	LT5	7.4	SEC1	11.53
12.21	LX5	4.33	SEC2	11.53
12.21	M0015	10.50	SFLG	11.30
11.55	M0429	10.51	TCNT	11.31
11.55	M10	10.53	TDAT1	11.43
11.55	M1000	10.60	TDAT	11.47
11.56	M11	10.54	TEMP1	11.32
11.56	M1629	10.55	TEMP2	11.33
11.56	M1	10.52	TEMP3	11.35
11.56	M2	10.56	VAX	12.26
12.22	M40	10.57		
12.22	MIN1	11.52		
11.60	MIN2	11.52		
11.60	NADAT	11.20		
11.60	NBUF	11.22		
11.61	NDXDY	11.23		
11.61	NFRAM	11.37		
11.61	NLINE	11.24		
11.61	NSHUT	11.36		
11.63	NSPOT	11.25		
11.63	PXY	11.26		
11.63	S10A	12.12		
11.64	S10B	12.12		
11.64	S11A	12.13		
11.64	S11B	12.13		
11.64	S12A	12.14		
7.23	S12B	12.14		
7.25	S13A	12.15		
7.21	S13B	12.15		
10.24	S14A	12.16		

```
[INTSR
[MOD OF AXINT FOR USE WITH WONG'S NEW 9300 PROGRAM

[VERSION 2 , REVISION C
[1/7/75

EXPUNGE
TITLE INTSR
ENTRY AXINZ,AGTEX,RQUSE,AXINT,ROWFW,SDSSV,FINSH,SW0A,SW01,SW02

AXINZ:        JUMP        .
              MDAR'F      SDSSV
              ARMD        77732         [SET UP INTERFACE INTERRUPT PIVOT
              MDAR'L                    [SET COMMUNICATIONS PIVOTS
              33000UH     PVT1
              ARMD        77730
              MDAS'F      1
              ARMD        77731
              OPI0        43120         [IS THIS AGT CONNECTED TO THE INTER
              JUMP        .+2           [NO, DONT RELEASE
              OPI0        43010         [RELEASE INTERFACE
              OPI0        430C4         [ENABLE 9300 TO AGT INTERRUPT
              MDIR        AXINZ

[SUBROUTINE TO REINITIALIZE SWO'S AND SWI'S IN BOTH PROCESSORS

AXINT:        JUMP        .
              MDAR        CLR
              ARMD        SW01
              ARX0'F
              ARMD        SW02
              JPSR        ROWFW
                          -0
                          SW0A
                          SW01
                          2
              MDIR        AXINT

  [SUBROUTINE TO SET DIRECTION OF TRANSFER IN INTERFACE

AGTEX:        JUMP        .
              MDAR        TAPE1
              ARMD        PVT1
              MDIR        AGTEX

  [SUBROUTINE TO REQUEST USAGE OF INTERFACE

RQUSE:        JUMP        .
              OPI0        43040
              JUMP        .-1           [WAIT
              OPI0        43120         [CONNECTED
              JUMP        .-1           [NO, WAIT
```

INTSR VERSION 2 REVISION C CREATED 07 JAN 75 DATE

MDIR'X RQUSE [RETURN

```
        [SUBROUTINE TO READ OR WRITE IN 9300 MEMORY

RØWFW:          JUMP           *              [ENTRY
                ØPIØ           43150          [BUSY ØR REQUEST PENDING
                JUMP           *-1            [YES, WAIT
                FPRI                          [FREEZE
                ARXØ'F                        [NØ, CLEAR PIVØT 1
                ARMD           PVT1
                MDAR'I         RØWFW          [IS THIS A WRITE TØ 9300
                JSLS           AGTEX          [YES, SET AGT TØ EXTERNAL
                MDAR'X'I       RØWFW          [NØ, GET PARAMETERS AND SET PIVØTS
                ARMD           PVT2
                MDAR'I         PVT2
                MDAR'A         AMSK
                MDAR'Ø         PVT1
                ARMD           PVT1
                MDAR'X'I       RØWFW
                MDAR'X'I'H'Ø   RØWFW
                ARMD           PVT2
                ØPIØ           43120          [CØNNECTED
                JPSR           RQUSE          [NØ, REQUEST USAGE
                ØPIØ           43020          [YES, CØNTINUE USAGE
                UPRI                          [UNFREEZE
                ØPIØ           43110          [BUSY
                JUMP           *-1            [YES, WAIT
                ØPIØ           43010          [RELEASE INTERFACE
                MDIR'X         RØWFW          [RETURN

        [INTERFACE INTERUPT SERVICE RØUTINE

SDSSV:          JUMP           *
                FPRI
                ARMD'L
SAVAR:                         0
                BRMD'L
SAVBR:                         0
                JPSR           RØWFW          [FILL STATUS WØRD ØUTPUT BUFFER
                               0
                               SWØA
                               SWØ1
                               2
                MDAR           SAVAR
                MDBR           SAVBR
                UPRI
                JUMP'I         SDSSV          [RETURN
```

```
        [RØUTINE TØ SET 9300 ACCESS BIT

FINSH:          JUMP           .
                MDAR           CLR
                ARMD           SW91
                JPSR           RØWFW
                               =0
                               SWØA
                               SW91
                               2
                MDIR           FINSH          [RETURN

ØPIØ=600VH

TAPE1:          200VH
AMSK:           77777
PVT1:           0
PVT2:           0
SWØ1:           0
SWØ2:           0
SWØA:           77776
CLR:            400VH

TERMINATE
```

Earthquake Plotting Program

This program was written on the PDP 11/50 in the C programming language, which is similar to PL/1. C is an excellent language for symbol manipulation and allows the user to specify new data types by using structures. Pointers are an important part of C and can be used to address structure elements as well as for more mundane purposes such as array indexing.

For the purpose of illustration, we will discuss the plotting of spectral data as displayed on the AGT-10 using On-line-ESP. An output tape is produced from ESP which consists of n+1 records for each plot to be processed. The first record contains header information which includes the fact that there are n subsequent records for the plot. Each of the n records contains the x-y coordinates of the transform spectrum for one line as it appeared on the AGT-10. The x values increase in neat steps, but the y values are the amplitudes or squared amplitudes of the Fourier coefficients at a particular frequency and can have a large range of values.

The Versatec can plot 264 bytes in one line and there are 200 lines per inch. It plots from the top of the page to the bottom. In order to draw the picture as it was seen on the AGT-10, the spectra must be plotted point by point from the largest to the smallest y value. The data are first scaled and then sorted in decending order. While the

plot is being made, additional points, resulting from the interpolation between actual data points, are included in the plot buffer. This results in a smoother, more continuous plot.

When all of the data have been plotted, the program plots a set of scale markers along the x-axis. These are appropritately annotated. In this application several frequencies are given along the x-axis. Finally the plot is documented with identifying information and useful data for each event.

The hard-copy capibility we have developed allows the user to make detailed comparisons between the spectral characteristics of earthquakes and explosions. The user is not forced to rely of the remembered appearances of interesting events after they have disappeared from the AGT-10 screen.

I. EQPLOT - Operating Summary

Mount the seven track tape produced by On-Line-ESP on the seven track tape drive of the PDP 11/50. The user has the option to execute the plotting program with an argument, which is the number of pictures to be skipped on the tape. If no argument is given, the plotting will begin with the first data set on the tape. The execution synopsis is:

eqplot n

where n is the number of plots to be skipped.

```
#define  XINT    320
#define  YINT   8000
#define  DELY    3200
#define  DELX     16
#define  AMPY    8000
#define  NLINE      1
#define  PI        3.141596525
#define  NPT     150
int zero 0;
int one 1;


struct{                                  //structure for header
     int npt;
     int line;
     int ldx;
     int ldy;
     int cptr;
     int nspt;
     int spot1;
     int spot2;
     int spot3;
     int hr,min,sec;
     int nft;
     int lag;
     int sr;
     int id[3];
     int lp;
     int scl;
     int mo,day,yr;
     int noise;
     int event;
}  head,  *h;

int hbuf[300];
struct  data    {                        //structure for data
     int x;
     int yd;
};

struct data *d;
int dbuf[3000];
int np;
int nip 8;


int idev,odev,sclx,scly,biasx,tdev;



//main                    main program may be called with one argument
//                        which is the number of pictures to be skipped
//                        on the input tape

main(argc,argv)
int **argv;
{
     int i,j,n;
     char *cs;
     if((tdev = open("/dev/spp",1)) < 0){
```

```
            printf("cannot open spp \n");
            exit();
        }
        if((pdev = open("/dev/rvp",1))<0){            //open the versatec
            printf("cannot open rvp \n");
            exit();
        }
        if((idev = open("/dev/rmt0",0))<0){           //open the tape drive
            printf("cannot open rmt6 \n");
            exit();
        }

        if(argc > 1){                         //skip specified number of pictures
            cs = argv[1];
            n = 0;
            while ( *cs >= '0' && *cs <= '9')
                n = n * 10 + *cs++ - '0';
            n =* 11;
            for ( i=0; i<n; i++)
                inp(idev, dbuf,1200);
            printf ("number of records skipped, %d\n",n);
        }
        while((inp(idev,hbuf,1200))>0){           //input header
            h = hbuf;
            j = 0;
            for(i = 0; i< h -> line; i++){        //input data lines
                n = inp(idev,&cbuf[j], 1200);
                j  =+ 2*(h->npt);
            }

            sclx = 0100; scly = 014;
            biasx=20;
            np = h->npt * h->line;
            scale();
            plot();
            header();
    //      cvers(pdev,020);
    //  stty(pdev,&one);
        }
}





#define  NBYT  263
#define  NBLK  0
#define  NSL  1250
#define  DRAW      1


struct ipt{
        int       y;
        char      *xpb;
        char      yinc;
        char      xdir;
        int       yf;
        int       cxp;
        int       *flink;
        int       *blink;
```

```
} itab[7*NBYT],*ip,*ia;

char pb[NBYT];


int *dp[1500];



plot()
{

	struct ipt *s;
	int i,j;
	sort();
	for(i = 0; i < NBYT; i++)		//clear plot buffer
		pb[i] = 0;
	for(i = 0; i < NBLK; i++)
		write(pdev,pb,NBYT);		//move to top of plot area
	ip = 0; ia = itab;		//plot scan line
	j = 0;
	for(i = NSL; i > -1; i--){
		while(j < np && *dp[j] == i){
			sip(dp[j]);		//set up plot point for interpolation
			j++;
		}
		pib(i);			//set up plot buffer
		write(pdev,pb,NBYT);//plot line
	}
}


int jsort;

sort()
{
	register i,k,t;

	i=0;
	for(d = dbuf; d < &dbuf[np*2]; d++)
		dp[i++] = &(d -> yc);

	k=np;
	while ( k =>> 1 ){
		jsort++;
		while ( jsort ){
			jsort = 0;
			for ( i=0; i< (np-k); i++)
				if ( *dp[i] < *dp[i+k] ){
					t=dp[i];
					dp[i]=dp[i+k];
					dp[i+k]=t;
					jsort++;
				}
		}
	}

//	}
}
```

```

sip(dpi)
	int *dpi;
{
	int xi,yi,xl,yl,xr,yr,incy,fy,dirx,cx,*s,lcx,inc;
	int i;
	s=dpi;
	lcx = 1;
	yi = *dpi--; xi = *dpi;

	if(++s < &(dbuf[2*np])){
		xr = *s++;
		yr = *s;
		if(yr & DRAW){
			if((inc = yi - yr) >= 0){
				if((incy = inc) == 0)
					dirx = nip;
				else{
					for(i = 0; ((incy = (inc/(nip >> i))) == 0); i++);
					dirx = (1 << i);
				}
				fy = yr;
				cx = 0200;
				lcx = 0;
				stack(yi-incy,incy,fy,xi,dirx,cx);
			}
		}
	}
	if(--dpi >= dbuf){
		if(yi & DRAW){
			yl = *dpi--;
			xl = *dpi;
			if((inc = yi - yl) >= 0){
				if((incy = inc) == 0)
					dirx = -nip;
				else{
					for(i =0; ((incy = (inc/(nip >> i))) == 0); i++);
					dirx = -(1 << i);
				}
				fy = yl;
				cx = lcx;
				stack(yi-incy,incy,fy,xi-1,dirx,cx);
			}
		}
	}
}



stack(a,b,c,dd,e,f)
	int a,b,c,dd,e,f;
{
	int *s;
int i;
struct int *z;

	ia -> y = a;
	ia -> yinc = b;
	ia -> yf = c;
	if(dd >= NPYT && dd < 0){
```

```
        printf("bad scale x=%d\n",dd);
        exit();
    }
    ia -> xph = dd + ph;
    ia -> xdir = e;
    ia -> cxp = f;

    if(ip == 0){
        ip=itab;
        ip->flink=ip->blink=0;
        ia++;
        ia->blink=ip;
        ia->flink=0;
    }
    else{
        s=ia->blink;
        s->flink=ia;
        if(ia->flink == 0){
            s = ia;
            if(++ia >= &itab[7*NBYT]){
                printf("itab overflow \n");
                exit();
            }
            ia->blink=s;
            ia->flink=0;
        }
        else{
            s = ia -> flink;
            s -> blink = ia;
            ia -> flink = 0;
            ia = s;
        }
    }
}


rib(sl)
    int sl;
{
    int i,j,n;
    int *s; s = ip;
    while(s){                               //setup plotting buffer
        if(s -> yf <0)                      //delete point
            if((s=free(s)) == 0)
                return;
        *s -> xph =s -> cxp;
        if(sl == s -> y){                   //line break
            i = ((n = s -> xdir) > 0 ? n : -n);
            if( n < 0 )                         //left
                for(j = 0; j < i; j++){
                    if(s -> cxp == 0){
                        *s -> xph =+ 1;
                        s -> cxp = 1;
                    }
                    *s -> xph =| (s -> cxp =<< 1);
                }
            else
                for(j = 0; j < i; j++){
                    *s->xph =| (s->cxp =>> 1);
                }
```

```
                s->y =- s->yinc;

            }
            if(sl <= s->yf)                 //end of point
                    s->yf = -1;
            s = s->flink;
        }
}


//free                    restore data cells to free list

free(s)
    int *s;
{
    int *t;
int i;
struct int *z;
    *s -> xpb = 0;
    if(s->blink == 0){
        ip = s->flink;
        ip->blink = 0;
        t=ip;
    }
    else{
        t = s->blink;
        t->flink = s->flink;
        t = s -> flink;
        if(t == 0){
            s -> flink = ia;
            ia = s;
            return(t);
        }
        t -> blink = s -> blink;
    }
    s->flink = ia;
    s->blink = ia->blink;
    ia = s;
    return(t);
}


//scale                   scale the input data points

scale()
{
    struct data *s;
    int dm,i,j,c,minx,miny;
    int dx[10],dy[10];
    s = dbuf; minx = miny = 077777;
    d=s;
    for(i=0; i<h->line; i++) {
        j=(h->cptr+i)%h->line;
        dx[j]=(h->line-i-1)*(h->ldx);
        dy[j]=(h->line-i-1)*(h->ldy);
    }
    for(i=0; i<h->line; i++) {
        for(j=0; j<h->npt; j++) {
            dm = d->yd % 1;                 //get the draw-move bit
            d->x =+ dx[i];                  //add in the x-bias
```

```
                d->yd =+ dy[i];                 //add in the y-bias
                d->yd =& 0177776;               //mask for draw-move
                d->yd =| dm;                    //replace draw-move bit
                d++;
                }
        }
        for(i = 0; i < np; i++){                //find the x and y minima
            minx = ((c = s -> x) < minx? c : minx);
            miny = ((c = s -> yd) < miny? c : miny);
            s++;
        }
        if(minx > 0)
            minx = 0;
        if(miny > 0)
            miny = 0;
        s=dbuf;
        for(i = 0; i < np; i++){
            dm = s -> yd & 1;               //get draw-move bit
            s -> x =- minx;             //bias by minimum x
            s -> yd =- miny;            //bias by minimum y
            s -> x =/ sclx;       //scale
            s ->x =+ biasx;
            if(s->x >= NBYT){
                printf("overflow ph \n");
                exit();
            }
            s -> yd =/ scly;            //scale
            if(s->yd > NSL)
                s->yd = NSL-1;
            s -> yd =& 0177776;         //mask for draw-move
            s -> yd =| dm;              //replace draw-move
            s++;
        }
    }

    inp(idf,buf,nbyte)
        int idf,*buf,nbyte;
    {
        int i,t,n,c;
        struct{
            char c1,c2,c3,c4;
        } cf[1200], *s;
        s = cf;
            if((n = read(idf,cf,nbyte)) > 0){
            for(i = 0; i < nbyte/4; i++){
                c = s -> c2 << 2;
                t = c << 10;
                t =| s -> c3 << 6;
                t =| s -> c4;
                s++;
                buf[i] = t;
            }
        }
    }

    char *cbp,*loc,t1[132],cb[10];
    header()
    {
        int i,j,ix,jx,n,m;
        double fn,f100;
```

```

	f100 = 100;
	skip(20);					//skip 20 lines

	clr();
	j = h -> cptr * h -> npt*2;
	ix = dbuf[j] ;				//locate correct line
	jx = dbuf[j + (h -> npt - 1)*2] ;
	i = ix;
	while(i < jx){
		pb[i] = 0200;
		i =+ 20;
	}
	for(i = 0; i < 20; i++)			//plot scale marker
		write(pdev,pb,NBYT);
	for(i = ix; i < jx; i++)		//set up scale line
		pb[i] = 0377;
	write(pdev,pb,NBYT);			//plot scale line
	skip(10);				//skip 10 lines
	clr();
	loc = &tl[ix/2];			//annotation
	i = h -> lp;
	while(i < (h -> lp + h -> npr)){
		fn = f100 * i * h -> sr/h -> nft;
		cbp = cb;
		conv(j = fn/100);
		m = cbp - cb;
		mov(loc, cb, m);
		*(loc + m) = '.';
		cbp = cb;
		conv(j = fn - j*100);
		n = cbp - cb;
		if(n == 1){
			cb[1] = cb[0];
			cb[0] = '0';
		}
		mov(loc + 1 + m, cb, 2);
		loc =+ 10;
		i =+ 20;
	}
//	cvers(pdev,040);
	write(tdev,tl,132);
	skip(25);
	clr();					//clear text line
	for(i = 0; i < 2; i++)
		write(tdev,tl,132);
		skip(25);
//	mov(tl + 60, "EVENT : ",8);
//	cbp = cb;
//	conv(h -> event);			//write event number
//	n = cbp - cb;
//	mov(tl + 68, cb, n);
//	write(tdev,tl,132);
//	clr();
//	mov(tl + 40,"ID : ",5);
//	n = conc(h ->id,cb,2);
//	mov(tl + 45, cb,2);
	mov(tl + 60,"DATE : ",7);
	cbp = cb;
	conv(h -> mo);				//write month
```

```
n = cbp - cp;
m = n + 67;
mov(tl + 67, cb,n);
tl[m] = '/';
m = m + 1;
cbp = cb;
conv(h -> day);                              //write day
n = cbp - cb;
mov(tl + m,cb,n);
m = m + n;
tl[m] = '/';
m = m + 1;
cbp = cb;
conv(h -> yr);                               //write year
n = cbp - cb;
mov(tl + m, cb,n);
mov(tl + 80, "TIME : ", 7);
cbp = cb;
conv(h -> hr);                               //write hour
n = cbp - cb;
mov(tl + 87, cb, n);
m = n + 87;
tl[m] = ':';
m = m + 1;
cbp = cb;
conv(h -> min);                              //write minute
n = cbp - cb;
mov(tl + m, cb,n);
m = m + n;
tl[m] = ':';
m = m + 1;
cbp = cb;
conv(h -> sec);                              //write second
n = cbp - cb;
mov(tl + m, cb,n);
write(tdev,tl,132);
skip(25);
clr();
mov(tl + 40, "SIZE : ",7);
cbp = cb;
conv(h -> nft);                              //write transform length
n = cbp - cb;
mov(tl + 47, cb,n);
mov(tl + 60, "OVERLAP : ", 10);
cbp = cb;
conv(h -> lag);                              //write transform lag
n = cbp - cb;
mov(tl + 70,cb,n);
mov(tl + 80, "SR : ", 5);
cbp = cb;
conv(h -> sr);                               //write sampling rate
n = cbp - cb;
mov(tl + 85, cb, n);
write(tdev,tl,132);
skip(25);
clr();
mov(tl + 40, "SCALE : ", 8);
cbp = cb;
conv(h -> scl);                              //write scale factor
n = cbp - cb;
```

```
     mov(tl + 48, cb, n);
//   mov(tl + 60, "NONOISE : ",10);
//   cbp = cb;
//   conv(h -> noise);                              //write noise factor
//   n = cbp - cb;
//   mov(tl + 70,cb,n);
     write(tdev,tl,132);
     skip(25);
     for(i=0;i<10000;i++);
     skip(300);
//   cvers(pdev,040);
//   stty(pdev,&zero);
}


conv(val)
     int val;

{
     int a;
     if(a = val/10)
          conv(a);
     *cbp++ = val % 10 + '0';
}


conc(c1,c2,n)
     char *c2;
     int n,*c1;
{
     int i,m;
     for(i = 0; i < n; i++){
          if(i == 0)
               m = (*c1 & 07700) >> 6;
          else
               m = *c1 & 0077;
          if(m == 012)
               *c2 = '0';
          if(m >= 01 && m <= 011)
               *c2 = '1' + m - 1;
          if(m >= 021 && m <= 031)
               *c2 = 'A' + m - 021;
          if(m >= 041 && m <= 051)
           *c2 = 'J' + m -041;
          if(m >= 062 && m <= 071)
               *c2 = 'S' + m - 062;
     c2++;
     }
     return(i);
}




skip(cnt)

     int cnt;
{
     int i;
     for(i = 0; i < cnt; i++)
```

```
		write(pdev,ph,2);
}


clr()
{
	int i;
	for(i = 0; i < 132; i++)
		tl[i] = ' ';
	tl[131] = '\n';
}


mov(to,from,n)

	char *to,*from;
	int n;
{
	int i;
	for(i = 0; i < n; i++)
		*to++ = *from++;
}
```

Bands

BANDS is the program used to find the spectral discriminant between earthquakes and explosions. It is relatively simple to run; however, because the transforms are preformed as part of this program, it can consume large amounts of computer time. The algorithm used is that described in the main section of this report. Results from the band analysis are stored on magnetic tape. By using the subroutine RSLTS, the operator can obtain a listing of the band analysis. The program also allows the user to call NIFTY, our general-purpose tape management subroutine.

The following parameters allow the user full control over the program:

IGM(0,1;0)	a 1-dimensional array with 21 entries. Each entry corresponds to a subarray. When IGM(I) = 1, the subarray is processed.
LFT(?;256)	Length, in points, of the transforms.
LAG(?;32)	Lag, in points, between transforms.
SP(?;10)	Sampling rate of data in points/sec.
FREQ(?)	High and low frequency limits of each band to be processed.
NBANDS(?;6)	Number of bands to be processed.
KNIFTY(0,1;0)	When 1, NIFTY will be called.

IRSLT(0,1;0)	when 1, RSLTS will be called.
MAMP(0,1)	0 - integrate over power of Fourier coefficienteents 1 - integrate over amplitudes of Fourier coefficients
NONORM(0,1)	0 - normalize with respect to bandwidth 1 - no normalization
NONOISE(?;0)	number of transforms to be averaged into noise spectrum
MGM(13)	maximum number of subarrays
LOOP(1)	total number of events to be processed. Each event may include several subarrays.

```
*       MONITOR FOR BAND PROCESSING
*
*       ALL NAMELIST INPUT IS HANDLED AT THE LEVEL OF THE SUBROUTINES, SO
*       THERE IS NONE APPEARING AT THIS STAGE OF THE PROGRAM
*
        INTEGER OTAPE,XCNT,BNDCTR,SR,SAMPTS
        REAL STOR
        COMMON NGM,NBANDS,FREQ(2,8),LFT,SR,LAG,XCNT,RES,LGCNT,IFILE,NOREC,
      * NONOISE,IFLAG,ISHT,NPT,KILL,ITAPE,ICARD,ISTAR,IAB,LSPEC,BNDCTR,
      * OTAPE,KNIFTY,IRSLT,IOBUF(13),LOOP,LOP,STOR(100,6),NGMCNT,IGM(21),
      * MGM,MAMP,NONORM
*
10      OUTPUT(102) 'READY'
        INPUT(101)
*
        ISTAR = 1
20      IF(KNIFTY .EQ. 1) CALL NIFTY
        KNIFTY = 0
        IF(IRSLT .EQ. 1) CALL RSLTS
        IRSLT = 0
30      CALL BANDS
        IF((KNIFTY .EQ. 1) .OR. (IRSLT .EQ. 1)) ISTAR=1; GO TO 20
        CALL XFORM
        GO TO 30
        END
```

```
      SUBRØUTINE BANDS
*
*     THIS PRØGRAM FINDS THE ENERGY WITHIN GIVEN FREQUENCY BANDS.
*     AS MANY AS 8 BANDS MAY BE USED
*     TRANSFØRM LENGTH IS RESTRICTED TØ 1024 PØINTS
*     THE TØTAL NUMBER ØF TRANSFØRMS CAN BE NØ MØRE THAN 1024 ØR THE
*       TØTAL NUMBER ØF PØINTS CAN BE NØ MØRE THAN 32K.
*
*
*
**********************************************************************
*                                                                    *
*                      DATA DESCRIPTIØN                              *
*                                                                    *
*                                                                    *
*                                                                    *
*     IGM      A 1-DIMENSIØNAL ARRAY WITH 21 ENTRIES.  WHEN IGM(I) IS *
*              SET EQUAL TØ 1, THE ARRAY IS PRØCESSED                *
*     LFT      LENGTH, IN PØINTS, ØF TRANSFØRM                       *
*     LAG      LAG, IN PØINTS, ØF TRANSFØRM                          *
*     SR       SAMPLING RATE ØF INPUT DATA IN PØINTS PER SECØND      *
*     FREQ     A 1-DIMENSIØNAL ARRAY IN WHICH THE HIGH AND LØW FREQUENCY*
*          LIMITS ØF EACH BAND ARE ENTERED                           *
*     NBANDS   NUMBER ØF FREQUENCY BANDS TØ BE PRØCESSED             *
*     KNIFTY   DEFAULTS TØ 0, WHEN SET TØ 1, CØNTRØL WILL PASS TØ THE *
*          NIFTY MAGNETIC TAPE PACKAGE                               *
*     IRSLT    DEFAULTS TØ  0, WHEN SET TØ 1, CØNTRØL WILL PASS TØ THE *
*          SUBRØUTINE WHICH PRINTS ØUT THE RESULTS                   *
*     MAMP     0 - INTEGRATE ØVER PØWER ØF FØURIER CØEFFICIENTS      *
*              1 - INTEGRATE ØVER AMPLITUDES ØF FØURIER CØEFFICIENTS *
*     NØNØRM   0 - NØRMALIZE INTEGRATIØN WITH RESPECT TØ WIDTH ØF BAND *
*              1 - NØ NØRMALIZATIØN                                  *
*     NØNØISE  DEFAULT IS 0.  THE NUMBER ØF TRANSFØRMS TØ BE AVERAGED *
*              INTØ THE NØISE SPECTRUM                               *
*     NGM      TØTAL NUMBER ØF SEISMØGRAMS FØR THE EVENT             *
*     LØØP     TØTAL NUMBER ØF EVENTS TØ BE PRØCESSED                *
*                                                                    *
**********************************************************************
*
*
      REAL STØR
      REAL FREBUF,KBUF
      INTEGER SAMPTS,XFILE,SR
      INTEGER BNDCTR,ØTAPE,XCNT,XFCT
      DIMENSIØN IBUF(1024),FREBUF(8),KBUF(512),INTSTR(1000)
      DIMENSIØN BUF(10)
*
      CØMMØN NGM,NBANDS,FREQ(2,8),LFT,SR,LAG,XCNT,RES,LØCNT,IFILE,NØREC,
     * NØNØISE,IFLAG,ISHT,NPT,KILL,ITAPE,ICARD,ISTAR,IAB,LSPEC,BNDCTR,
     * ØTAPE,KNIFTY,IRSLT,IDBUF(13),LØØP,LØP,STØR(100,6),NGMCNT,IGM(21),
```

```
     * MGM,MAMP,N0N0RM
*
      NAMELIST LFT,SR,FREQ,NBANDS,KNIFTY,IRSLT,KILL
      NAMELIST IGM,ICARD,MAMP,N0N0RM,LAG,ITAPE,0TAPE
*
      DATA XFILE/10/,LREC/1024/,N0SFILE/25/
      EQUIVALENCE(SAMPTS,IDBUF(8)),(ST0R,INTSTR)
      EQUIVALENCE (IBUF(100),BUF)
      NAMELIST N0N0ISE,L00P,MGM
*
*
*     REC0VER AT THE APPR0PRIATE PLACE IN THIS SUBR0UTINE
*
      G0 T0 (5,10,20,40) ISTAR
*
*     SET UP PARAMETERS
*
5     FREQ(1,1) = 0.4
      FREQ(2,1) = FREQ(1,2) = 0.6
      FREQ(2,2) = FREQ(1,3) = 1.0
      FREQ(2,3) = FREQ(1,4) = 1.4
      FREQ(2,4) = FREQ(1,5) = 2.0
      FREQ(2,5) = FREQ(1,6) = 3.0
      FREQ(2,6)  = 4.5
      LFT = 256
      MGM = 13
      MAMP = 0
      LAG = 32
      L00P = 1
      SR = 10
      KNIFTY = IRSLT=KILL=0
      ITAPE = 1
      0TAPE = 2
      ISTAR = 2
      NBANDS = 6
      ICARD = 0
      N0N0ISE = 0
      D0 6 I = 1,21
6     IGM(I) = 0
      IGM(3) = IGM(7) = IGM(8) = IGM(11) = IGM(13) = 1
       D0 7 I = 1,NBANDS - 1
7     FREQ(1,I+1)=FREQ(1,I+1) + .001
*
10    0UTPUT(102) 'READY T0 G0'
      INPUT(101)
      IF(ICARD .EQ. 1) INPUT(5)
      NGM = 0
      D0 12 I = 1,13
12    NGM = NGM + IGM(I)
      ICARD = 0
```

```
      LOP = 0
20    IF(KNIFTY .EQ. 1) ISTAR = 3; RETURN
13    IF(IRSLT .EQ. 1) ISTAR = 1; RETURN
15    LOP = LOP + 1
      IF(LOP .GT. LOOP) GO TO 10
      NGMCNT = 0
17    NGMCNT = NGMCNT + 1
      IF(NGMCNT .GT. MGM) GO TO 15
*
      IF(IGM(NGMCNT) .EQ. 0) CALL FORSCN(ITAPE,1); GO TO 17
      CALL INIT
*
30    IF(XECT .NE. 0) GO TO 40
      ISTAR = 4
      RETURN
*
40    CALL BIRTH
      IF(IFLAG .EQ. 777) GO TO 100
      CALL INTEGR
      BNDCTR = BNDCTR + 1
*
      DO 60 IAB = 1,NBANDS
      STOR(BNDCTR,IAB) = FREBUF(IAB)
60    CONTINUE
      IF(BNDCTR .EQ. 100) GO TO 100
*
      GO TO 30
*
*     END OF INPUT DATA, OUTPUT RESULTS.
*
100   IOBUF(13) = BNDCTR
      CALL READD(NOSFILE,IBUF,LREC)
      CALL INTEGR
      DO 110 IAB = 1,LREC
110   IBUF(IAB) = 0
      DO 120 IAB = 1,13
120   IBUF(IAB) = IOBUF(IAB)
      DO 125 IAB = 1,NBANDS
125   BUF(IAB) = FREBUF(IAB)
      CALL BINOUT(OTAPE,IBUF,LREC,IND)
      DO 150 IAB = 1,NBANDS
      DO 130 K = 1,512
130   KBUF(K) = 0.0
      DO 140 K = 1,BNDCTR
140   KBUF(K) = STOR(K,IAB)
150   CALL BINOUT(OTAPE,KBUF,LREC,IND)
      CALL WEOF(OTAPE,0)
      CALL BAKREC(ITAPE,1)
      CALL FORSCN(ITAPE,1)
      GO TO 17
```

```
*
      SUBROUTINE BIRTH
*
*     RECOVERY SUBROUTINE AFTER RETURN FROM TRANSFORM
*
      IF(XFCT .NE. 0) GO TO 20
*
20    CALL READD(XFILE,IBUF,LREC)
      LGCNT = LGCNT + 1
      MA = XFCT*LSPEC
      DO 30 II = 1,LSPEC
30    IBUF(II) = IBUF(MA+II)
      XFCT = MOD(XFCT+1,XCNT)
      IF(LGCNT.GE.(SAMPTS-LFT)/LAG) IFLAG = 777
      RETURN
*
*
*
      SUBROUTINE INTEGR
*
*
*     DOES TRAPEZOIDAL INTEGRATION OVER A GIVEN FREQUENCY BAND.
*     THE ENERGY PER RESOLUTION ELEMENT IS FOUND
*
      DO 10 IAB = 1,NBANDS
      IP1 = FREQ(1,IAB)/RES
      IP2 = FREQ(2,IAB)/RES
      INT1 = IP2-IP1 + 1
      FREBUF(IAB) = 0
      DO 10 II = 1,INT1
      M = IP1 + II
*      THIS APPEARS TO BE ONE POINT OFF; HOWEVER, WHEN THE DC COMPONENT
*     IS ACCOUNTED FOR, WE START ON THE CORRECT FREQUENCY POINT
      VAL = FLOAT(IBUF(M))**2
      IF(MAMP .EQ. 1) VAL = IBUF(M)
      IF(VAL .LT. 0) VAL = 0
      IF(NONORM .EQ. 1) FREBUF(IAB) = FREBUF(IAB) + VAL*RES; GO TO 10
      FREBUF(IAB) = VAL*RES/INT1 + FREBUF(IAB)
10    CONTINUE
      RETURN
*
*
      SUBROUTINE INIT
*
*     READ IN HEADER RECORD AND SAVE IT
*
      BNDCTR = 0
      LGCNT = 0
      XFCT = 0
      LSPEC = LFT/2
```

```
      XCNT = LREC/LSPEC
      IFLAG=ISHT=0
      RES=FLOAT(SR)/FLOAT(LFT)
      CALL BININ(ITAPE,IBUF,LREC,IND)
      NOREC = IBUF(1)
      DO 10 IAB = 1,13
10    IDBUF(IAB) = IBUF(IAB)
      IDBUF(1) = NBANDS
      DO 20 IAB = 1,512
20    KBUF(IAB) = 0
      DO 30 IAB = 1,1000
30    INTSTR(IAB) = 0
      IF(((IDBUF(8) -LFT/LAG).GT.100).AND.(NBANDS.GT.6)) OUTPUT(102) 'TO
     *O BAD'; INPUT(101)
      IF(NOREC .GT. 16) OUTPUT(102) 'TOO MANY'; INPUT(101)
      RETURN
*
      END
```

```
      SUBRØUTINE RSLTS
*
*     PRINT ØUT THE RESULTS ØF INTEGRATIØNS IN USEABLE FØRM
*
*     NAMELIST PARAMETERS:
*
*     LØØP = NUMBER ØF ØUTPUT FILES TØ BE PRINTED ØUT
*     RNØRM = NUMBER ØF FREQUENCY BAND WITH RESPECT TØ WHICH THE
*             NØRMALIZATIØN WILL TAKE PLACE FØR A PARTICULAR SPECTRUM
*     NØRM = NUMBER ØF FREQUENCY BAND WITH RESPECT TØ WHICH NØRMALIZA-
*             TIØN ØF ALL ØF THE SPECTRA WILL TAKE PLACE
*     IRWND = FLAG TØ REWIND INPUT TAPE
*
*
      REAL HBUF
      REAL MX
      REAL IBUF,KBUF
      INTEGER TAPE,SR,RNØRM,NØRM
*
      DIMENSIØN IBUF(512,8),JBUF(1024),NBUF(20),BUF(512)
      DIMENSIØN KBUF(6),FBUF(6),HBUF(6),MX(6) ,RBUF(10)
*
      CØMMØN NGM,NBANDS,FREQ(2,8),LFT,SR,LAG,ISTUP(6),NØNØISE
      NAMELIST NGM,LFT,SR,LAG
      NAMELIST MXALL,MXNØ,ISUM
      NAMELIST LØØP,RNØRM,NØRM,ISF,TAPE
      NAMELIST IRWND
      DATA IRWND/0/
      DATA TAPE/2/,ISF/1/,RNØRM/2/,NØRM/2/
      DATA LREC/1024/
      DATA MXALL/1/,MXNØ/1/,ISUM/0/
      EQUIVALENCE (KBUF,NBUF),(JBUF,BUF),(JBUF(100),RBUF)
*
*
10    ØUTPUT(102) 'DATA'
      INPUT(101)
      IF(IRWND .NE. 0) CALL RWND(TAPE)
      IF(ISUM .EQ. 0) LØØP = LØØP *NGM
      DØ 90 LP=1,LØØP
      IF(ISUM .NE. 0) CALL SUMAR; GØ TØ 21
15    CALL BININ(TAPE,JBUF,LREC,IND)
*
      NBANDS = JBUF(1)
      IF(NBANDS .GT. 8) ØUTPUT(102)'NBANDS'; INPUT(101)
*
      DØ 20 I = 1,NBANDS
      CALL BININ(TAPE,IBUF(1,I),LREC,IND)
20    CØNTINUE
*
21    WRITE(6,99)
```

```
      WRITE(6,100)   JBUF(1),JBUF(2),JBUF(6),(JBUF(I),I=3,5),
     * (JBUF(I),I=10,12),LFT,LAG,JBUF(9),JBUF(13),NØNØISE
*
      WRITE(6,200)((FREQ(I,J),I=1,2),J=1,NBANDS)
      WRITE(6,250) (RBUF(I),I = 1,NBANDS)
      WRITE(6,300)
      ICTR = JCTR = 0
      ICTR = 1
      IFLAG = 1
      IF(MXALL .EQ. 1) MXNØ = JBUF(13)
      DØ 25 I = 1,6
      MX(I) = 0
      DØ 25 K = 1,MXNØ
      MX(I) = AMAX(MX(I),IBUF(K,I))
25    CØNTINUE
30    DØ 51 K = 1,5
      DØ 49 I = 1,NBANDS
      IF(ICTR .GT. JBUF(13)) GØ TØ 80
*
      IF(IBUF(ICTR,RNØRM).EQ.0) IBUF(ICTR,RNØRM)=0.01
      KBUF(I) = IBUF(ICTR,I)
      FBUF(I) = IBUF(ICTR,I)/IBUF(ICTR,RNØRM)*ISF
      HBUF(I) = IBUF(ICTR,I)/MX(NØRM)*ISF
49    CØNTINUE
      ICTR = ICTR + 1
      WRITE(6,400) (KBUF(I),FBUF(I),HBUF(I),I=1,NBANDS)
51    CØNTINUE
      WRITE(6,500)
      JCTR = JCTR + 5
      IF(((IFLAG .EQ. 1) .AND. (JCTR .GE. 40)) .ØR. (JCTR .GE. 45))
     * CALL HEADER
      GØ TØ 30
*
*
80    IF(ISUM .EQ. 0) CALL FØRSCN(TAPE,1)
90    CØNTINUE
*
99    FØRMAT(1H1)
100   FØRMAT('NØ. BANDS ',I5,3X,'ID. NØ. ',I5,3X,'SUBARRAY ',A4,3X,
     * 'MØ ',I2,'  DAY ',I2,'  YR ',I2,'   HR ',I2,'  MIN ',I2,'  SEC ',
     * I2/'TRANSFØRM LENGTH ',I4,'PTS',3X,'LAG ',I4,'PTS',3X,'SAMPLING
     *RATE ',I4,'PTS/SEC',3X,'NØ. XFØRMS ',I4,4X,'NØNØISE ',I4///)
*
200   FØRMAT(6(6X,F4.2,1X,'-',1X,F4.2,5X))
250   FØRMAT(6(F14.1,8X))
*
300   FØRMAT(6(2X,'VALUE',3X,'RATIØ',2X,'NØRM',1X))
*
400   FØRMAT(6(E8.3,1X,F5.2,1X,F5.3,2X))
*
```

```
500   FØRMAT(' ')
*
      SUBRØUTINE HEADER
      WRITE(6,99)
      WRITE(6,200)   ((FREQ(I,J),I=1,2),J=1,NBANDS)
      WRITE(6,300)
      JCTR = IFLAG = 0
99    FØRMAT(1H1)
200   FØRMAT(6(6X,F4.2,1X,'-',1X,F4.2,5X))
300   FØRMAT(6(2X,'VALUE',3X,'RATIØ',2X,'NØRM',1X))
      RETURN
*
*
      SUBRØUTINE SUMAR
      CALL BININ(TAPE,JBUF,LREC,IND)
      DØ 20 I = 1,20
20    NBUF(I) = JBUF(I)
      NBUF(6) = 60214343B
      NBANDS = NBUF(1)
      DØ 30 I = 1,NBANDS
30    CALL BININ(TAPE,IBUF(1,I),LREC,IND)
      CALL FØRSCN(TAPE,1)
      DØ 40 I = 1,ISUM -1
      CALL BININ(TAPE,JBUF,LREC,IND)
      DØ 35 K = 1,NBANDS
      CALL BININ(TAPE,JBUF,LREC,IND)
      DØ 35 J = 1,512
35    IBUF(J,K) = IBUF(J,K) + BUF(J)
40    CALL FØRSCN(TAPE,1)
      DØ 50 I = 1,NBANDS
      DØ 50 J = 1,512
50    IBUF(J,I) = IBUF(J,I)/ISUM
      DØ 60 J = 1,20
60    JBUF(J) = NBUF(J)
      RETURN
      END
```

Tape Preparation Programs

There are three programs for the preparation of tapes to be used with ESP, DSO, and DXD. They are: READDATA, MERGE, and EVTRD. These programs are part of an overlay package. Below is a description of the purpose and operation of these programs.

I. READDATA

This program was written to read and transcribe the ordinary seismic data tapes provided by Teledyne Geotech. The original format of the tapes is BCD with short records. This is very bulky since large quantities of tape are used merely for end of record gaps. The tapes resulting from READDATA are binary and have the following format:

1. a header record of length 1024 words
2. data records of length 1024. The last data record is padded with zeros.

The header record contains the following information:

WORD	NEMONIC	DESCRIPTION
1	NREC	number of data records to follow header record
2	IDTAPE	tape identification number
3	MO	month
4	DAY	day

5	YR	year
6	ISITE	site identification, for LASA this was the subarray descriptor
7	NCH	number of channels on the data records. Usually this was one channel, but, for a few test tapes, two channels one of which was for timing, were used.
8	LENGTH	total number of sample points
9	SR	sampling rate in samples per second
10	TIME(1)	time in hours
11	TIME(2)	time in minutes
12	TIME(3)	time in seconds

For the data supplied by CDC, the time was the arrival time of the signal. The time given for the data supplied by ACDA was the start time of the data.

Operation

1. mount program tape on MT3A and read into the computer using a rerun deck for MT3A. Type IREAD = 1 * c/r on the control console.

2. mount original Teledyne tape on MT1A and the output tape on MT2A

3. a message will appear on the control console

'DATA IN'

4. input parameters should be specified.

IDATE mo,day,yr each two digits

IDTAPE five-digit tape identification number

NARAY number of subarrays on input tape to be processed

5. on the line-printer the header for each time sequence will be printed out

6. when all of the subarrays have been processed, steps 3, 4, and 5 may be repeated

II. MERGE

To conserve an much magnetic tape as possible, this program allows the user to consolidate the results of several READDATA runs on one tape. It simply copies the input tape verbatum onto an output tape.

Operation

1. mount program tape on MT3A and read into computer using card deck to rerun from MT3A. Type IMERG = 1 * c/r on the control console.

2. mount input tape on MT1A and output tape on MT2A

3. a message will appear on the control console

START

4. input parameters

NARRAY number of subarrays for data set about to be copied

5. upon completing the copy, steps 3 and 4 may be repeated.

III. EVTRD

This program was written to read BCD event tapes from Teledyne. The format of the input and output tapes is the same as that described for tapes used by READDATA.

Operation

1. mount probram tape on MT3A and run using card deck labeled rerun from MT3A. Type IEVNT = 1 * c/r on the control console.

2. mount input and output tapes on MT1A and MT2A respectively

3. the message, TAPE, will appear on the control console. At this point, make sure that the correct input tape is mounted, then type * c/r.

4. the message, DATA IN, will appear on the control console.

5. specify the parameters

IDTAPE, IDATE, NARRAY, and SF

where the first three are the same as those described in READDATA and the last is the scale factor.

6. The program will loop through steps 4 and 5 ten times and then go back to step 3 at which point the input and/or output tapes can be changed.

```
*      MØNITØR FØR TAPE PRØCESSING
*
*      CØMMANDS ARE:
*
*      IREAD = 1      TØ READ A TYPICAL DATA TAPE FRØM TELEDYNE
*      IMERG = 1      TØ MERGE TØGETHER SEVERAL TAPES
*      IEVNT = 1      TØ READ AN EVENT TAPE
*
       NAMELIST IREAD,IMERG,IEVNT
       DATA IREAD/0/,IMERG/0/,IEVNT/0/
*
5      ØUTPUT(102) 'CØMMAND'
       INPUT(101)
       IF(IREAD .NE. 0) CALL READDT; IREAD = 0; GØ TØ 5
       IF(IMERG .NE. 0) CALL MERGE; IMERG= 0; GØ TØ 5
       IF(IEVNT .NE. 0) CALL EVTRD; IEVNT = 0; GØ TØ 5
       GØ TØ 5
       END
```

```
$MITE  PZE      0
       BRM      9SETUPN
       PZE      2
IDSITE PZE      0
ISITE  PZE      0
      LDA      *IDSITE
       LRSA     014             SHIFT UPPER 12 BITS TO LOWER OF WORD
       LLSA     014
       STA      *ISITE
       BRR      MITE
       END
```

```
      SUBROUTINE EVTRD
*      SUBROUTINE TO READ EVENT TAPE
*
      DIMENSION IBUF(1024),JBUF(1200),ARAY1(1040),IARAY2(13,80),
     * ISDAT(3),IDATE(3),RDATA(8),TIME(4),SITE(70),ZEROS(330),
     * ISITE(3),IRY(1040)
      EQUIVALENCE(IRY,IARAY2)
      INTEGER OTAPE
      NAMELIST SF,ICARD,IDTAPE,IDATE,NARRAY,LSTAPE,IFIN
      DATA SF/100/,ICARD/0/,OTAPE/2/,ITAPE/1/,LREC/1024/, NARRAY/13/,
     * LSTAPE/0/,JREC/1200/,IFIN/0/
*
      CALL EOFSET(200S)
*
5     OUTPUT(102) 'TAPE'
      INPUT(101)
      IF(IFIN .NE. 0) RETURN
      DO 170 NMK = 1,10
      OUTPUT(102) 'DATA IN'
      INPUT(101)
      IF(ICARD .EQ. 1) INPUT(5)
      ICARD = 0
*
10    READ(1,1000) ISDAT,TIME,SITE,ZEROS
      CALL WRTHED
      IF(NREC*1024 .LT. ISDAT(3)) NREC = NREC + 1
      DO 60 IJ = 1,NREC
      DO 20 I = 1,1024
20    IBUF(I) = 0
      DO 50 J = 1,128
      DO 30 M = 1,8
30    RDATA(M) = 0.0
      LENCOM = (IJ-1)*LREC+ J*8
      READ(1,3000) (RDATA(K) , K = 1,8)
      DO 40 L = 1,8
40    IBUF((J-1)*8 + L) = RDATA(L)*SF
      IF(LENCOM .GE. LENGTH) GO TO 70
50    CONTINUE
      CALL BINOUT(OTAPE,IBUF,LREC,IND)
60    CONTINUE
      CALL WEOF(OTAPE,0)
      GO TO 80
70    CALL BINOUT(OTAPE,IBUF,LREC,IND)
      CALL WEOF(OTAPE,0)
80    CONTINUE
*
      READ(1,1000) ISDAT,TIME,SITE,ZEROS
      DO 140 I = 1,13
      DO 90 J = 1,150
      READ(1,3000) (RDATA(K),K = 1,8)
```

```
      DØ 90 K = 1,8
90    JBUF((J-1)*8 + K) = RDATA(K) *SF
      DØ 100 J = 1,1024
100   IBUF(J) = 0
      CALL WRTHED
      DØ 110 J = 1,1024
110   IBUF(J) = JBUF(J)
      CALL BINØUT(ØTAPE,IBUF,LREC,IND)
      DØ 120 J = 1,1024
120   IBUF(J) = 0
      DØ 130 J = 1,176
130   IBUF(J) = JBUF(1024 + J)
      CALL BINØUT(ØTAPE,IBUF,LREC,IND)
      CALL WEØF(ØTAPE,0)
140   CØNTINUE
170   CØNTINUE
*
200   ØUTPUT(102) 'EØF'
      GØ TØ 5
1000  FØRMAT(3I10,F10.2,2F5.0,F5.1,25X/3(20A4/),10A4,10F4.0/
     * 15(20F4.0/),20F4.0)
3000  FØRMAT(8F10.4)
*
*     WRITE ØUT THE HEADER
*
      SUBRØUTINE WRTHED
*
      NREC = ISDAT(3)/1024
      IF(NREC*1024 .LT. ISDAT(3)) NREC = NREC + 1
      CALL MITE(SITE(1),ISITE)
      IBUF(1) = NREC
      IBUF(2) = IDTAPE
      IBUF(3) = IDATE(1)
      IBUF(4) = IDATE(2)
      IBUF(5) = IDATE(3)
      IBUF(6) = ISDAT(1)
      IBUF(7) = ISDAT(2)
      IBUF(8) = ISDAT(3)
      IBUF(9) = TIME(1)
      IBUF(10) = TIME(2)
      IBUF(11) = TIME(3)
      IBUF(12) = TIME(4)
      WRITE(6,2000) ISDAT,TIME,NREC,SITE(1)
2000  FØRMAT(1X,'SEISMØGRAM NØ. = 'I7,5X,'NCH = ',I10,5X,'SMPLS/CH = ',
     * I10/'RATE',I3,5X,'HR',I3,5X,'MIN',I3,5X,'SEC',I3,5X,'NREC',I3/
     * 'SITE',A2)
      CALL BINØUT(ØTAPE,IBUF,LREC,IND)
      LENGTH = ISDAT(3)
      RETURN
```

```
      SUBROUTINE READDT
*     CONVERT DATA TO INTEGER AND DUMP ON TAPE
*     RECORDS ARE 1024 WORDS LONG - THE FIRST RECORD IS AN IDENTIFIER
*
*
*     ARRANGEMENT OF DATA IN HEADER RECORD
*       1 - NREC - NUMBER OF RECORDS OF DATA TO FOLLOW FOR CURRENT GRAM
*       2- EVENT ID - A 5 DIGIT INTEGER NUMBER
*       3- EVENT DATE   MONTH
*       4- EVENT DATE   DAY
*       5- EVENT DATE   YEAR
*       6- SITE AND GRAM NUMBER IDENTIFIER
*       7- NUMBER OF CHANNELS OF DATA   ONLY ONE IS LEGAL
*       8- LENGTH OF SEISMOGRAM  NUMBER OF SAMPLES PER CHANNEL
*       9- SAMPLING RATE IN SAMPLES PER SECOND
*      10- START TIME OF SEISMOGRAM   HR
*      11- START TIME OF SEISMOGRAM   MIN
*      12- START TIME OF SEISMOGRAM   SEC
*
*
      DIMENSION ISDAT(3)
      DIMENSION IDATE(3), RDATA(8), TIME(4), SITE(70),ZEROS(330),
     *          IBUF(1024)
      INTEGER IDATE,IDTAPE,ISDAT,IRATE,NREC,IBUF,TESTF,ITWO,OTAPE,LREC
      NAMELIST SF,ICARD,IDTAPE,IDATE,NARRAY,LSTAPE,IFIN,IRWND
      DATA SF/1000/, ICARD/0/, OTAPE/2/, LREC/1024/, ITAPE/1/,
     * NARRAY/13/,LSTAPE/0/,IFIN/0/,IRWND/0/
      EQUIVALENCE (IBUF(6),ISDAT)
*
*
      CALL EOFSET(60S)
*
*     READ A SEISMOGRAM AND CONVERT DATA TO INTEGER
*
    5 OUTPUT(102) 'DATA INPUT'
*
*     SUGGESTED INPUT - 5-DIGIT IDTAPE, 3 INTEGER NUMBERS IDATE =
*      MONTH, DAY, YEAR;  NARRAY = NUMBER OF SUBARRAYS; LSTAPE = 1 IF
*      WORKING ON LAST TAPE AND WANT A DOUBLE EOF AT THE END OF THE
*     OUTPUT TAPE
*
      INPUT(101)
      IF(IFIN .NE. 0) RETURN
      IF(ICARD .EQ. 1) INPUT(5)
      ICARD = 0
*
*     READ HEADER ON DATA TAPE
*
      WRITE(6,250)
250    FORMAT(1H1)
```

```
  6 DO 55 NALL = 1,NARRAY
 10 READ(1,100) ISDAT, TIME, SITE, ZEROS
100 FORMAT(3I10,F10.2,2F5.0,F5.1,25X/3(20A4/),10A4,10F4.0/
   *        15(20F4.0/),20F4.0)
    TESTF = 0
    MPTS = (ISDAT(3) - (ISDAT(3)/8)*8)    + ISDAT(3)
    MPTS = MPTS*ISDAT(2)
    NREC = MPTS/1024
    IF(NREC*1024 .LT. MPTS) NREC = NREC + 1
    LENGTH = MPTS
    IBUF(1) = NREC
    IBUF(2) = IDTAPE
    IBUF(3) = IDATE(1)
    IBUF(4) = IDATE(2)
    IBUF(5) = IDATE(3)
    IBUF(9) = TIME(1)
    IBUF(10) = TIME(2)
    IBUF(11) = TIME(3)
    IBUF(12) = TIME(4)
    CALL MITE(SITE(1),ISITE)
    IBUF(6) = ISITE
    CALL  BINOUT(OTAPE, IBUF, LREC, IND)
    WRITE(6,200)     ISDAT, TIME, NREC, SITE(1)
200 FORMAT(1X,'SEISMOGRAM NO. = ',A4, 5X,'NCH =', I10,5X
   * 'SMPLS/CH =',I10/'RATE',I3,5X,'HR',I3,5X,'MIN',I3,5X,'SEC',I3,
   * 5X,'NREC',I3/'SITE',A2)
*
*     READ DATA
*
    DO 50 IJ = 1,NREC
    DO 20 I = 1,1024
 20 IBUF(I) = 0
    DO 40 J = 1,128
    DO 25 M = 1,8
 25 RDATA(M) = 0.0
    LENCOM = (IJ-1)*LREC + J*8
    READ(1,300) (RDATA(K),K=1,8)
300 FORMAT(8F10.4)
    DO 30 L = 1,8
 30 IBUF((J-1)*8 + L) = RDATA(L)*SF
    IF(LENCOM .GE. LENGTH) GO TO 45
 40 CONTINUE
    CALL BINOUT(OTAPE,IBUF,LREC,IND)
 50 CONTINUE
     CALL WEOF(OTAPE,0)
    GO TO 55
 45 CALL BINOUT(OTAPE, IBUF, LREC, IND)
     CALL WEOF(OTAPE,0)
 55 CONTINUE
    GO TO 70
```

```
   60 TESTF = TESTF + 1
      IF(TESTF .GT. 1) GØ TØ 70
      GØ TØ 6
70    IF(IRWND .NE. 0) CALL RWND(ITAPE)
      IF(LSTAPE .EQ. 1) CALL WEØF(ØTAPE,0)
      GØ TØ 5
      SUBRØUTINE DUMMY
      RETURN
      END
```

```
*       NAMELIST PARAMETERS
*       NARRAY = NUMBER ØF ARRAYS TØ BE CØPIED
*       IFIN = 1      TØ GØ BACK TØ THE MØNITØR PRØGRAM
*
        SUBRØUTINE MERGE
*       PRØGRAM TØ MERGE EARTHQUAKE READDATA TAPES
*
        INTEGER ØTAPE
        DIMENSIØN IBUF(1024)
        NAMELIST IFLAG,NARRAY,IFIN
        DATA LREC/1024/,NARRAY/13/,ITAPE/1/,ØTAPE/2/,IFIN/0/
*
        IFLAG = 0
10      ØUTPUT(102) 'START'
        INPUT(101)
        IF(IFIN .NE. 0) RETURN
        DØ 50 I = 1,NARRAY
        DØ 20 K = 1,1024
20      IBUF(K) = 0
        CALL BININ(ITAPE,IBUF,LREC,IND)
        IF(IND .NE. 0) GØ TØ 60
        IF(IFLAG .EQ. 1) IBUF(2) = 6; IFLAG = 0
        NØREC = IBUF(1)
        CALL BINØUT(ØTAPE,IBUF,LREC,IND)
        DØ 40 J = 1,NØREC
        DØ 30 K = 1,1024
30      IBUF(K) = 0
        CALL BININ(ITAPE,IBUF,LREC,IND)
        IF(IND .NE. 0) GØ TØ 60
        CALL BINØUT(ØTAPE,IBUF,LREC,IND)
40      CØNTINUE
        CALL WEØF(ØTAPE,0)
        CALL BININ(ITAPE,IBUF,LREC,IND)
        IF(IND .NE. 0) GØ TØ 50
        ØUTPUT(102) 'NØEØF'
        INPUT(101)
50      CØNTINUE
        GØ TØ 10
60      ØUTPUT(102) 'WRØNG EØF'
        INPUT(101)
        GØ TØ 10
        END
```

Appendix B

Spectral Characteristics

of the

P Codas of Eurasian Earthquakes and Explosions

SPECTRAL CHARACTERISTICS OF THE P CODAS OF EURASIAN EARTHQUAKES AND EXPLOSIONS

J.F. Evernden

Introduction

Over the past decade, numerous analyses of the short-period digitized seismograms recorded at the Large Aperture Seismic Array (LASA) in Montana have been conducted with the intent of ascertaining the discrimination (earthquake versus explosion) capability inherent in those seismograms. The modes of analytical treatment of the data in these several studies varied in some detail but all studies processed the data in an identical manner prior to application of the variable analytical procedures.

LASA originally consisted of 21 small arrays (25 instruments closely grouped within a circle of 7 kilometer radius) distributed in a logarithmic spiral over a circle having a diameter of 200 kilometers. In all studies published to date, the resultant 525 signals were merged into one by, first, direct summing of all seismometers of a subarray ("infinite velocity" sums) and, then, beam-steering of the resultant 21 signals ("time-shift and sum"), striving to thus accentuate on a particular LASA beam the signals from a particular area.

Given this final single trace for signals emanating from a particular area, analyses of various types were conducted:

a. Ratio of energy in first five seconds of seismogram to energy in next 20 seconds ("complexity"), the idea being that signals from explosions would be of shorter duration than those from earthquakes. It was found that, on the average, this was indeed true but that there are earthquakes having the same

complexity ratio as the typical explosion, and vice versa. Therefore, the criterion fails frequently on an event-by-event basis and thus constitutes an unsatisfactory discrimination criterion (Evernden, 1969, for example).

b. More complex treatments of the pattern of energy in the P coda have been published again seeking to characterize shape of the continuing signal. An improved discrimination capability was achieved but overlap still occurred between earthquake and explosion values.

c. Because of the narrowness of the signal band-pass on the beam-steered LASA sum and because of concentration on energy-related discriminants, efforts to develop a discriminant based on spectral properties of the signals were limited to use of data between 0.5 and 2 Hz. When comparing energy in the band-passes .35 - .85 Hz and 1.45 - 1.95 Hz, general separation (the explosions having the greater high frequency content) was found, but such a discriminant failed to separate extreme values of each event type (Lacoss, 1969). In a recent study, Savino and Archambeau (1974) (details in Archambeau, 1975, and Bache, et.al., 1974) have investigated the discrimination inherent in using low Q (Q = 10) filters centered at 0.5 and 2 Hz applied to normal LASA main beam seismograms and in comparison of the relative amplitudes of the resultant "seismograms". They found that they could achieve discrimination for all but some deep-focus earthquakes.

An important fact that emerged at an early date in studies of LASA data was that the signal-to-noise ratio on the best subarray is invariably about two times greater than that on the main LASA beam, i.e., heterogeneities in earth structures under LASA are causing drastic focusing and de-focusing phenomena. By extensive testing, it was established that all signals detected by computer

processing of the main beams were easily detected by an analyst using visual display of the subarray beams. In addition, the analyst had an essentually zero false alarm rate while the computer had a very high false alarm rate near its "detection" threshold.

Associated with this effect was the observation that it is always impossible to achieve a $\sqrt{n}$ increase in signal-to-noise ratio when steering the array. If a sub-set of adequately separated seismometers are used, a $\sqrt{n}$ suppression of noise can be achieved but this does not result in a $\sqrt{n}$ increase in signal-to-noise. Thus, there is unavoidable degradation in signal amplitude near 1 Hz when trying to steer the entire array, implying even more severe degradation at higher frequencies.

Investigation of the signals from earthquakes as displayed on the main beams indicated there to be very little energy at and above a frequency of 2 Hz. Therefore, the decision was made in early 1969 to decimate the data as collected at the seismometer site (20 samples per record) to 10 samples per second to reduce data transmission and storage problems.

In spite of the phenomena reported above, no published study has investigated the signals as recorded on the subarray beams. The remarkable results to be reported in the next few pages follow upon the simple act of looking at those signals.

Comparison of Full-Beam and Subarray Signals

All seismograms used in this study have been played out in analogue format for detection of clipped signals and data errors ("gliches"). As recorded on infinite-velocity subarray-beams, none of the signals used displayed any clipping. For events with m_b values of about 6 or greater, at least some individual seismometers did display clipping even though the infinite velocity subarray beams did not. Complete recordings of all individual seismometers are not available. The quantitative effect of such clipping of occasional seismometers on the subarray sums is unknowable without detailed knowledge of each seismometer trace. Therefore, the subarray beams of the larger events will be used and analyzed in the same manner as those of the smaller events. Thus, all data for events of $m_b \geq 6$ must be considered as in error at some unknown level. Though the details of spectra may be perturbed from the correct values for the larger events, it is hard to imagine how discrimination criteria could be strongly perturbed. All gliches were removed prior to spectral analysis. All analysis to be reported in this paper is based on Fourier analysis of hammed time-window seismograms. The time-window is 12.8 seconds. Successive time-windows have a 7/8's overlap, i.e., the time-window shifted forward 1.6 seconds for each successive spectrogram (Figure 1 through 4). Only data obtained at 20 samples per second will be investigated as regards discrimination capability in the present study, analysis being limited, therefore, to data acquired prior to early 1969. For this initial paper, the only time-window considered is that containing maximum energy.

Because of a marked contrast in the spectra of normal microseismic noise and signals, the presence of a signal is generally obvious when looking at spectral composition of a time-segment. Thus, Figures 1 through 4 illustrate signal arrival and decay for spectograms from which the mean value of noise at all frequencies has been removed. Each curve on these figures is the Fourier

spectrum, plotted as the square of the Fourier spectral amplitude (A), of successive time-windows as defined above. Figures 1 and 2 are for an earthquake and Figures 3 and 4 for an explosion. The typical contrast in rate of signal decay is obvious, but is not used in the present study. The tendency to higher frequencies in the explosion is also clear. It should be understood that amplitudes on Figures 1 through 4 are not expressive of $(\text{ground motion})^2$ but rather of $(\text{amplitude})^2$ as recorded on the seismogram, the response curve of the seismometer and electronics (Figure 5) causing a marked difference between relative spectral amplitudes in the ground and on the seismogram.

For purposes of quantitative analysis, the spectral data of each event were treated in terms of several spectral windows, all Fourier amplitudes falling in each window being simply added together with no normalization for width of the spectral window. Because of the peak in instrument response at 4-5 Hz (Figure 5) and the lengthening of the spectral windows at higher frequencies, the mode of data presentation adopted accentuates any high frequency

(Ed: Sentence continues on next page)

content of the signal. Corrections to relative ground motion can be made by data provided in the paper and are so done in later portions of the paper.

The spectral windows investigated are (the digitization rate preventing investigation of higher frequencies):

Spectral Window	1	0.4 - 0.6 Hz,
	2	0.6 - 1.0 Hz,
	3	1.0 - 1.4 Hz,
	4	1.4 - 2.0 Hz,
	5	2.0 - 3.0 Hz,
	6	3.0 - 4.5 Hz,
	7	4.5 - 6.0 Hz,
	8	6.0 - 9.0 Hz.

Lower frequencies were not investigated routinely because of high noise amplitudes and steepness of response curve of short period LASA seismometers below 0.5 Hz. Limitation to data below 4.5 Hz in the first stages of analysis here reported is arbitrary and done only when comparing differences in main beam and subarray data.

Table 1 presents comparative spectral data uncorrected for noise level for several large Russian explosions as recorded on the main LASA beams and on the infinite-velocity beam of the F4 subarray, this subarray having the highest signal-to-noise ratio of the available subarray beams for the events studied. The entries in the several r_i columns of this and subsequent tables are ratios of the sum of Fourier spectral amplitude components in each window (1 through 6 in Tables 1 and 2, 1 through 8 in Tables 3 and 4) divided by the sum of spectral amplitude components in window 2 (i.e., $A_{0.6}^{1.0}$). It is apparent that the decorrelation effects that prevent $\sqrt{n}$ gain in signal-to-noise ratio near 1 Hz (see above) cause near elimination of all energy above 2 Hz on the main LASA beam, even reducing mean amplitude in the 1.4 - 2 Hz spectral window by a factor of 2. It is obvious that assertions used as the basis for decimating LASA data as recorded originally, i.e., no signal strength beyond 2 Hz, were in error. As

will be shown in a subsequent section, the signal-to-noise ratio in the 6 - 9 Hz pass-band for Russian explosions of m_b 6.0 as recorded on the F4 subarray is generally approximately 10, suggesting the presence of detectable signal at even higher frequencies.

Table 2 presents similar data for a set of Eurasian earthquakes. The point to be noticed is that there is a detectable increase in relative amplitudes of the high frequency windows for only the largest earthquakes, i.e., only noise is being recorded in these windows for most earthquakes. Inspection of the data of earthquakes alone might give a basis for keeping only 10 samples per second of data, but the data of Russian explosions show clearly the error of doing this. The lack of detectable high frequncy energy in Eurasian earthquakes at LASA must derive from the spectral characteristics of those earthquakes, not from a characteristic of the propagation path to LASA.

Because of the phenomenon displayed in Table 1, all further analysis will use only spectral data from the best subarray available (Fl, 2, 3, 4).

A second point requiring emphasis is the impact of using an energy criterion. If the data of either Table 1 or 2 are treated on a direct energy basis (i.e., $\sum(\text{amplitude})^2$ values), it is obvious that any contributuions to such a summation for frequencies of greater than 2 Hz will be undetectable, thus giving another erroneous basis for decimating the LASA data. A criterion based on $\sum(\text{amplitude})$ values combined with a normalization factor for each spectral window seems far more appropriate. Event though amplitudes at higher frequencies are low relative to those between 1 and 2 Hz, the levels measured may be many times noise level and may be extremely important in discrimination.

Discriminant D, Using 0.4 to 9 Hz Data

With the general observations noted above in mind, the spectral composition of the subarray signals of 36 explosions and 23 earthquakes for which we had valid 20 samples per second data (i.e., events earlier than March 1969) were investigated.

Table 3 gives the conventional and spectral data for each event studied. The m_b values for all USSR explosions are carefully intercalibrated by use of data of a fixed network and normalizing to values expected of a network of low amplitude stations (Evernden, 1975). The $A^{1.0}_{.6}$ column is the summation of spectral components in the [.6-1.0] Hz window expressed in arbitrary units, the last two digits being the power of ten by which to multiply the initial three-digit number. Spectral values are as appropriate to the seismogram, not to ground motion. Spectral values in all windows (i.e., r_i entries) are expressed as a ratio to the spectral sum in the [.6 - 1.0] Hz window. Values are corrected for noise level in so far as the limited data available permit (from 10 seconds before to 30 seconds after P arrival). When the observed values appear to be simply noise, the noise value is indicated in parentheses followed by an N.

Table 4 presents average spectral values for groups of Eurasian explosions and shallow-focus earthquakes, the grouping being by amplitudes in the [.6-1.0] Hz window. The mean m_b value for USSR explosions in each group is indicated. The groupings are identical for explosions and earthquakes. The gross contrast in spectral composition of explosions and earthquakes is clearly apparent. Of equal significance is the clear presence of 6-9 Hz energy for all of the larger explosions, the average value of the amplitude sum for the 10 largest explosions of Group A being about 10 times the ambient noise level. It can also be seen in Table 4 that the spectral composition of both explosions and earthquakes is a function of magnitude of the explosions. In a later portion of this paper, these data will be analyzed in terms of source spectra, etc. but, for the moment, discussion is restricted to examination of a simple spectral discriminant using the full band width of data obtained from LASA recordings.

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Note in Table 4 that the spectral values for all explosion means is greater at 1.0 - 1.4 Hz than at .6 - 1.0 Hz while being less for earthquakes. On the contrary, explosion means are less at .4 - .6 Hz than are those for earthquakes. Therefore, the following discriminant is examined.

$$D_j = \sum_{i=1}^{8} n_i r_{ij} \qquad i = 1 \text{ to } 8$$

where j designates the event number, i the spectral window with i = 1 for .4 - .6 Hz and 8 for 6 - 9 Hz. The n_i are normalization factors, calculated by taking the ratio of the $\bar{r}_3$ and $\bar{r}_i$ values ($\bar{r}_i$ values being the mean values of Table 4), the appropriate value for each j event being dictated by its $A^{1.0}_{.6}$ value or m_b value. The values of n_1 and n_2 are used as negative numbers, while all others are positive, this usage being intended to accentuate the relative spectral difference of explosions and earthquakes noted above.

Table 5 gives the resultant D value for each event, the events being grouped according to their $A^{1.0}_{.6}$ values. The parentheses following each D value contain two numbers characterizing the number of spectral windows in the (-) and (+) groups with data above noise level.

Table 5A, for the events of Groups A of Table 4 ($A^{1.0}_{.6} > .100 \times 10^5$), shows all Eurasian explosions to have positive D values while all earthquakes have negative D values, the two least negative values being for deep focus earthquakes (D_{103} and D_{113}). There is apparently clear contrast in D values for explosions at Semipalatinsk and Novaya Zemlya. The presumed explosions at 38.8 N 65.1 E and 47.9 N 47.8 E had the lowest D values in Group A.

Table 5 B, for events of Group B of Table 4 with $A^{1.0}_{.6}$ between $.5 \times 10^4$ and $.10 \times 10^5$ shows similar D values. All shallow focus earthquakes studied to date give more negative D values than explosions.

Table 5C, for events of Group C of Table 4 with $A^{1.0}_{.6}$ values between $.1 \times 10^4$ and $.5 \times 10^4$, shows similar results. The presumed explosion at 57.7N 65.3E (D_{17} Table 5C) shows a much smaller D value than do most explosions at Semipalatinsk. The single explosion studied at or near 50.1 N 79.0 E(D_{27}) has the lowest D value calculated for USSR explosions.

Tables 5D and E show similar results, an Algerian explosion (D_{158}) giving a D value of + 1.8.

Therefore, this simple D discriminant achieves strongly negative values for essentially all earthquakes, even for all except one deep-focus earthquake, and zero (event No. 27) to strongly positive values for all explosions.

Implications So Far

Previous analyses of LASA P coda data have failed to exploit the spectral content of the signals for discrimination purposes because of three m·jor errors: use of the main LASA beam in analysis, use of an energy discriminant without normalization as a function of frequency, and resultant use of data only from .4 to 2.0 Hz. The analysis above shows that a discriminant using data from .4 to 9 Hz with normalization as a function of frequency achieves separation of the set of earthquakes and explosions studied.

It should also be noted that the bandwidth available is adequate to discriminate the largest events, (including deep-focus earthquakes) whereas a bandwidth limited to .6 and 3 Hz cannot achieve such success. Additionally, it is noted that, rather than decimating LASA data in 1969, the digitizing rate should have been increased. A signal-to-noise ratio of 10 at 6 - 9 Hz for m_b 6.0 events suggests presence of measurable energy at even higher frequencies.

For reference, the last line of entries in several $\bar{r}_i$ columns of Table 4 below the earthquakes $\bar{r}_i$ values contains data on the mean noise levels, expressed in the same units as $A^{1.0}_{.6}$, in each spectral window. Though somewhat premature relative to the total discussion it is pointed out here that these values imply a f^{-3} dependency (where f is frequency). This indicates, as will be seen via analysis given later, there to be an f^{-1} dependency of signal/noise ratio for Semipalatinsk signals at 2 - 9 Hz. Thus, a signal/noise ratio of 10 at 6 - 9 Hz suggests detectable energy well above noise level at above 10 Hz.

Generalities on Source Spectra of Explosions and Shallow-Focus Earthquakes

The data base presented in Table 3 is certainly of limited size and the drawing of expansive conclusions from it may seem unwarranted. However, the attempt will be made to illustrate the internal consistency of the data set with both itself and other seismological data, and thus to substantiate general conclusions.

First, note that the m_b values for Soviet explosions and the logarithm of the $A^{1.0}_{.6}$ values (Table 4) are nearly proportional, 1.4 m_b units being associated with a factor of about 35 decrease in mean value of recorded $A^{1.0}_{.6}$ values between events included in Groups A & E. Therefore, the amplitude scaling near 1 second at LASA is, on the average near the m_b network scaling, a not unexpected result.

Next, inspection of the $A^{1.0}_{.6}$ and $\bar{r}_i$ or r_i values of Group B Earthquakes ($.50 \times 10^4 \leq A^{1.0}_{.6} \leq .99 \times 10^4$), Group C Earthquakes ($.10 \times 10^4 \leq A^{1.0}_{.6} \leq .49 \times 10^4$), Earthquake 90 ($A^{1.0}_{.6} = .94 \times 10^3$), and Earthquake 100 ($A^{1.0}_{.6} = .40 \times 10^3$) shows that all of these events appear to have a common spectral composition at high frequencies. This conclusion is independent of mode of reduction of the data to estimates of source spectra, deriving as it does simply from noting that the product ($A^{1.0}_{.6} \times r_i$) is nearly constant for all of those groups of data at the higher frequencies. Figures 6A and 6B, in which the data of all of these events is adjusted in an identical manner, show these relationships. Thus, commonality of the high frequency asymptote for earthquakes below magnitude 5.5 or so is suggested. The larger earthquakes (Group A) have a relative amplitude of $\bar{r}_i$ values for the higher frequencies similar to that for the Group B earthquakes but appear to have higher amplitudes at all frequencies, thus following a parallel but different asymptote than the smaller earthquakes. This difference may be the result of source persistence for large earthquakes, and

the result of analyzing a 12.8 second time window.

In contrast, the explosion data show no tendency for explosions of different sizes to reach the same high frequency asymptote, at least not within the band-width investigated here (Figure 7). In addition, the rate of fall-off of spectral amplitudes with increasing frequency for explosions is far less than for earthquakes.

In any effort to estimate the shape of the source spectra of earthquakes and explosions from the data of Tables 3 and 4, a degree of arbitariness must be included. The factors to be considered are frequency dependent attenuation due to inelastic processes during propagation and loss of high frequencies associated with making the infinite velocity sum for the subarray beam. The former effect is generally assumed to be of the form $e^{-\alpha f}$ where α is independent of frequency; the latter effect is probably more an $f^{-\beta}$ effect. The mode of analysis will be to assume certain attenuation effects with the intent of having reasonable values of attenuation associated with a reasonable source spectrum for earthquakes and explosions.

Interpreted Source Spectra of Earthquakes

Figure 6B illustrates the calculated source spectrum for earthquakes when taking account of widths of each spectral window used and when using $\alpha = .824$ in the attenuation term $e^{-\alpha f}$, and using $\beta = .38$ in the term $f^{-\beta}$. These values are selected by trial and error to yield an f^{-3} high frequency slope for earthquake spectra and to allow for frequency sensitive attenuation in the subarray sum. Comparison of Figures 6A and 6B illustrates the role of the $f^{-\beta}$ term.

The interpreted result is then a source spectrum for earthquakes having an f^{-3} asymptote at high frequencies while flattening at low frequencies, all of which is within

some current models. The implied mean Q for the entire propagation path from Eurasia to LASA is

$$Q = \pi(10,000)/15(.824) = 2500$$

(path length of 10,000 kilometers with average velocity of 15 km/sec). This is an acceptable value.

Therefore, the spectral data of earthquakes of Table 3 and 4 can be processed to yield credible values for attenuation and source spectra.

Interpreted Source Spectra of Explosions

To begin with, consider only the data for the explosions near 50N 48E, (here designated as Semipalatinsk, Site A). Since nearly all explosions studied are from this area, the values for Table 4 will be used as typical of this site.

Semipalatinsk, Site A

The data of Figures 6 and 7 suggest three bases for spectral discrimination between earthquakes and explosions. Firstly, there is an $f^{-1.3}$ greater rate of high frequency attenuation of earthquake spectra relative to those of Semipalatinsk/Site A explosions. Secondly, explosions have a higher corner frequency than do shallow focus earthquakes for the same source spectral level around 1 Hz. Thirdly, the spectral values below the corner frequency decrease with decreasing frequency for explosions. The accentuation of these latter characteristics within the range $.5 \leq f \leq 4$ for small magnitude events explains why failure to detect frequencies higher than 4.5 Hz does not decrease the discrimination capability of the D discriminant at small magnitudes even though higher frequencies are not measurable. The behavior at large magnitudes explains in part why the large Novaya Zemlya explosions have lower D values, i.e., for a pass-band limited to periods of less than 2 seconds, the complete low frequency behavior is not incorporated into the discriminant.

These data suggest that the discrimination between earthquakes and explosions via the D discriminant resides in the contrasting source spectra of these two types of seismic events, not in contrasting attenuation due to systematic differences in location.

Semipalatinsk, Site B

As noted above, all except one of the presumed explosions from the general area around Semipalatinsk are from near 50N 78E, while a single event (Number 27) is a presumed explosion from near 50N 79E, here termed Site B. Though this event is successfully discriminated as an explosion, it had an unusually low D value. Being from a locality so near the other explosions, one cannot appeal to changes in deep crustal or mantle properties to explain the different spectral shape. The differences between the two sites seem more reasonably to be a response to differences in properties of the rocks in which the explosions were implaced or in rocks at very shallow depths. Events No. 27 can be used in support of this hypothesis. Inspection of the data of this event shows the basic difference between the spectra of events from Sites A and B is an apparent nearly f^{-1} greater frequency dependency of the calculated source spectrum for the Site B explosion if interpretation is by the model of Figure 7. However, it would appear probable that the source spectrum of this explosion is fundamentally similar to that of those from Site A and that the calculated f^{-1} greater slope of the data of this event is a response to near-site properties, the only obvious way to get such a drastic effect being in the inelastic zone around the explosion. Whatever the case, it is of interest that multiplication of the r_{ij} values of Event No. 27 by a factor of $e^{.28f}$ to correct them to an f dependency at high frequency similar to that for events from Site A yields adjusted r_{ij} values which, when used in the formula of Table 5, result in calculation of a high positive value for D_{27}.

Such a situation suggests that the low D values of the presumed explosions of Tables 3 and 4 at sites other than near Semipalatinsk and Novaya Zemlya may well be the result in part of explosions in softer rocks than those at Semipalatinsk. In all cases, the low D values of such explosions are associated with spectral decrease with increasing frequency being more exaggerated than that for Site A explosions.

It is suggested that departure from $f^{-1.67}$ dependency of calculated source spectra via the calculational procedures described above implies an additional $e^{-\alpha f}$ dependency from one or more/beyond that appropriate to Semipalatinsk/Site A. causes

By multiplying data of all spectral windows by the factor required to bring the high frequency data to an $f^{-1.67}$ dependency, one can determine the spectral amplitudes around 1 Hz that would have been observed if any non-Semipalatinsk/Site A explosion had actually been at Site A. In principle, the intercalibration could extend to referring all USSR explosions to NTS via use of data from such a station as NORSAR. Such a potentiality is being evaluated.

Novaya Zemlya Explosions

Though the low D values for the Novaya Zemlya explosions might be expected to arise from the same effects as noted above, investigation of the data of these events by the model of Figure 7 shows them to have a calculated $f^{-1.66}$ dependency at high frequencies, i.e., in agreement with data for explosions from Site A, Semipalatinsk. Therefore, another explanation for the low D values must exist.

Since the large Novaya Zemlya explosions are larger than any Semipalatinsk explosions and since the $\bar{r}_i$ and thus n_i values of Tables 4 and 5 show definite correlation with size of event, it seems relevant to extrapolate the $\bar{r}_i$ values of Table 4 to a higher m_b. Such extrapolation is indicated in Figure 8, where smoothed lines are put through the $\bar{r}_i$ data of Table 4. If one uses the $\bar{r}_i$ values for m_b 6.4 as pertinent to Novaya Zemlya events, D_5 increases from 3.55 to 6.26. All other D values for Novaya Zemlya events of Table 5 increase similarly.

A correlated factor leading to lower D values for these explosions has been noted above, i.e., the fact that the spectral flattening and rolling over typical of explosion

spectra is largely at lower frequency than 0.5 Hz for these events, thus preventing the contrast in low frequency behavior of explosions and earthquakes from entering a criterion limited to frequencies of or greater than 0.5 Hz. Gains of the LASA short period instruments are so uncertain at periods of greater than 2 seconds that no investigation of this point is made at this time.

Further Comments

It was pointed out in Evernden (1975) that assumption of a common high frequency asymptote with slope of f^{-3} for spectra of all earthquakes provided a simple spectral model that agreed with the observed $M_s:m_b$ relationship at all magnitudes. The inverse of that demonstration is that the observed $M_s:m_b$ relationship cannot be explained via an earthquake scaling model which has a common high frequency asymptote with a slope of other than f^{-3}. If extensive documentation of the situation suggested in this paper results, i.e., a common high frequency asymptote for spectra of all earthquakes, the conclusion would be unequivocal that source spectra of earthquakes as calculated via spectral analysis of signals must have a slope at high frequencies of f^{-3}.

Assumption of an f^{-3} high frequency slope for earthquake spectra led to an $f^{-1.67}$ slope for spectra of Semipalatinsk explosions. Arguments given by Brune (1970) show this slope must be $f^{-1.5}$ or greater and studies such as that of Bach, et.al., (1975) derive theoretical values of $f^{-1.5}$ to $f^{-2.3}$ for explosions in various media. Use of an f^{-2} slope for earthquakes would give lower Q values for the mantle and a high frequency spectral slope of f^{-1} or less for Semipalatinsk explosions, an unacceptable value.

Therefore, the multiple constraints, both observational and theoretical, that can be applied to restrict possible spectral models for earthquakes and explosions appear to suggest the models used here. The mantle Q value is reasonable, and any marked change in the slope of the high frequency asymptote for either explosions or earthquakes would lead to apparently unacceptable values for the other.

A Modified D Discriminant and Estimates of Yield

The results presented above suggest that attenuation effects can be approximately evaluated if data to 6 - 9 Hz or greater are available. Also, they suggest use of a modified D discriminant for events whose LASA recordings appear to have higher f dependency than expected of earthquakes. Simply adjust all data of such events so as to have a high frequency dependency similar to that of an earthquake. Calculation of D using the resultant r_{ij} values should yield D values high enough for discrimination.

It may be useful to point out a possible procedure for estimating yields of explosions at uncalibrated test sites. Having proven an event to be an explosion by use of the D discriminant or by M_s:m_b or other criterion, adjustment of all spectral data to yield a high frequency behavior of the "observed" LASA spectra for Site A explosions, or of $f^{-1.67}$ on calculated source spectra, should yield spectral values in the neighborhood of 1 Hz nearly correctly calibrated as to *equivalent yield* against any reference test site with a known Y vs. m_b relationship.

Final Implications

From the data of Table 4 and 5, it appears that, because of the progressive change in spectral shape of explosions with decreasing magnitude, a D-type discriminant will successfully discriminate earthquakes and explosions to essentially the threshold of network detection and location (i.e., $\geq$ 4 station detection), there being nearly certainly at least two stations at which an accurate D value could be calculated.

These results, if massively substantiated, will make irrelevant the attainment of the capability to detect surface waves of small events, make irrelevant both planned and inadvertent mixing of long period waves as a confusion factor in discrimination, and make irrelevant accurate calculations of depths of focus of earthquakes. In addition, the demonstrated presence of signal at 3 - 4.5 Hz for explosions of m_b 4.1 (Table 3) at epicentral distances of 85° and greater implies a far greater capability to separate closely spaced events than deemed possible in the past and thus to detect multi-shot sequences previously deemed unseparable. In this regard, it is pertinent to remember Archambeau's prediction (1976) that multiple-explosions in scenarios deemed credible by conventional criteria will result in augmented high frequencies, i.e., will look "more like an explosion than an explosion".

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Tables

Table 1 - Spectral Compositions of the Full LASA Beam (BM) and F4 Subarray (F4) Beam for Selected USSR Explosions (Sampling rate = 10 per second). $A_{0.6}^{1.0}$ is sum of Fourier spectral components (ΣA) in spectral window 2, i.e., from 0.6 to 1.0 Hz. r_i is ratio of sum of Fourier spectral components in window i and 2.

Table 2 - Spectral Compositions of the Full LASA Beam (BM) and F4 Subarray (F4) Beam for Selected Eurasian Earthquakes (Sampling rate = 10 per second). $A_{0.6}^{1.0}$ is sum of Fourier spectral components (ΣA) in spectral window 2, i.e., from 0.6 - 1.0 Hz. r_i is ratio of sum of Fourier spectral components in window i and 2. Depth is in kilometers.

Table 3 - Spectral Composition of Subarray Beams of Selected Explosions and Earthquakes (Sampling rate = 20 per second). $A_{0.6}^{1.0}$ is sum of Fourier spectral components (ΣA) in spectral window 2, i.e., from 0.6 - 1.0 Hz. r_i is ratio of sum of Fourier spectral components in window i and 2.

Table 4 - Mean Spectral Composition of Groups of Explosions and Earthquakes of Table 3, Grouping being by Value of $A_{0.6}^{1.0}$. $A_{0.6}^{1.0}$ is sum of Fourier spectral components (ΣA) in spectral window 2, i.e., from 0.6 to 1.0 Hz. r_i is ratio of sum of Fourier spectral components in windows i and 2. No. is number of events in each group.

Table 5 - Value of D Discriminant for Each Event of Table 3.

Figures

Figure 1 - Spectrogram of Earthquake of 6/26/75. Time-window - 12.8 seconds, time step between adjacent spectrograms = 1.6 seconds, vertical scale = A^2 in arbitrary units, where A is amplitude of Fourier component. Noise corrections have been made based on mean values of noise over 30 seconds prior to signal.

Figure 2 - Continuation of spectrograms for Event of Figure 1. Short horizontal arrows on Figure 1 and 2 indicate same time window.

Figure 3 - Spectrograms of Explosion. Time-window = 12.8 seconds, time step between adjacent spectrograms = 1.6 seconds, vertical scale = A^2 in arbitrary units, where A is amplitude of Fourier component. Noise corrections have been made based on mean values of noise over 30 seconds prior to signal.

Figure 4 - Continuation of Spectrograms for Event of Figure 3. Short horizontal arrows on Figure 3 and 4 indicate same time-window.

Figure 5 - Short Period Response Curve - LASA

Figure 6A- Interpreted Source Spectra of Earthquakes: Attenuation Assumed = $e^{.824f}$. B and C indicate spectra of Groups B and C of Table 4. 90, 92, and 100 indicate spectra of events of those numbers in Table 3.

Figure 6B- Interpreted Source Spectra of Earthquakes: Attenuation Assumed = $e^{-.824f} \times f^{-.38}$. B, C, 90, 92 and 100 as in Figure 6A.

Figure 7 - Interpreted Source Spectra of Semipalatinsk (Site A Explosions: Attenuation Assumed = $e^{-.824f}$ x $^{-.38}$. A, C, E, indicate spectra of explosions of Groups A, C, and E of Table 4.

~~Table~~ Figure 8 - $\bar{r}_f$ versus m_b.

Table 1

USSR Explosions

No.	Date YR MO DY	m_b	Array	r_1 (.4-.6)	r_2 (.6-1.0)	r_3 (1.0-1.4)	r_4 (1.4-2)	r_5 (2-3)	r_6 (3-4.5)
1	66 02 13	6.3	BM	.142	1.000	2.023	1.286	.493	.161
			F4	.369	1.000	1.538	2.286	1.721	.507
2	66 03 20	6.2	BM	.105	1.000	1.937	1.365	.388	.067
			F4	.204	1.000	2.047	2.800	1.553	.368
3	66 08 19	4.7	BM	.372	1.000	4.232	2.721	1.241	.270
			F4	.572	1.000	2.989	2.927	3.932	1.365
4	66 10 19	5.6	BM	.089	1.000	2.002	1.649	.630	.032
			F4	.115	1.000	2.151	2.875	2.697	.370
5	66 10 27	6.3	BM	.266	1.000	1.572	.959	.329	.084
			F4	.220	1.000	1.051	1.794	.725	.169
6	66 12 03	4.9	BM	.434	1.000	3.517	3.265	.744	.104(N)
			F4	.680	1.000	4.839	6.183	3.458	.600
7	66 12 18	5.9	BM	.204	1.000	1.860	1.863	.730	.076
			F4	.272	1.000	2.570	3.888	2.370	.507
8	67 02 26	6.0	BM	.197	1.000	1.935	1.203	.713	.736
			F4	.397	1.000	1.800	2.118	1.690	.228
9	67 03 25	5.3	BM	.123	1.000	2.300	.1446	.538	.036(N)
			F4	.257	1.000	2.563	2.636	2.377	.200
10	67 04 20	5.7	BM	.151	1.000	2.488	1.587	.525	.082
			F4	.266	1.000	2.601	2.766	2.506	.500

Table 2

Eurasian Earthquakes

No.	Date YR MO DY	m_b	Array	r_1 (.4-.6)	r_2 (.6-1.0)	r_3 (1.0-1.4)	r_4 (1.4-2)	r_5 (2-3)	r_6 (3-4.5)	Depth
201	72 01 20	4.6	BM	.207	1.000	.922	.123	.090(N)	.081	144
			F4	.200	1.000	.757	.154	.179	.091	
202	72 01 20	6.0	BM	.203	1.000	.965	.605	.054	.020	214
			F3	.056	1.000	1.438	1.569	.187	.132	
206	72 02 22	5.3	BM	.244	1.000	.694	.519	.034(N)	.016(N)	213
			F4	.154	1.000	.956	.790	.081	.022(N)	
207	72 02 26	5.3	BM	.480	1.000	1.170	.443	.064(N)	.029(N)	36
			F1	.295	1.000	1.224	.183	.066(N)	.040(N)	
208	72 03 04	5.1	BM	.191	1.000	1.589	1.302	.415	.122	160
			F4	.216	1.000	2.056	1.935	.869	.169	
209	72 03 17	5.2	BM	.173	1.000	1.263	.409	.184	.113	25
			F4	.144	1.000	1.638	.696	.304	.250	
210	72 03 20	6.0	BM	.286	1.000	1.641	.513	.056	.043	46
			F3	.126	1.000	2.202	.895	.263	.194	
212	72 04 05	5.0	BM	.163	1.000	.930	.302(N)	.133(N)	.082(N)	
			F4	.482	1.000	1.011	.512	.119(N)	.120	

Table 3 **Explosions**

No.	Epicenter	Origin Time YR MO DY	m_b	Depth	$A^{1.0}_{.6}$	r_1 (.4-.6)	r_2 (.6-1.0)	r_3 (1.0-1.4)	r_4 (1.4-2.0)	r_5 (2-3)	r_6 (3-4.5)	r_7 (4.5-6)	r_8 (6-9)	Subarray
1	49.8N 78.1E	66 02 13	6.1	-	.116 05	.368	1.000	1.806	1.636	1.147	.396	.189	.030	F4
3	49.8N 78.1E	66 08 19	4.3	-	.442 03	(.287)N	1.000	2.379	1.709	2.377	7.51	(.028)N	(.044)N	F4
4	49.8N 78.1E	66 10 19	5.5	-	.640 04	.215	1.000	2.235	1.930	1.700	.231	.093	.022	F4
5	73.4N 54.6E	66 10 27	6.5	-	.205 05	.376	1.000	1.111	1.355	.545	.108	.103	.016	F4
6	49.7N 78.0E	66 12 03	4.4	-	.349 03	(.235)N	1.000	4.019	3.093	1.751	.322	.041	.065	F4
7	49.9N 77.7E	66 12 18	5.7	-	.569 04	.330	1.000	2.581	2.352	1.449	.330	.135	.033	F4
8	49.8N 78.1E	67 02 26	5.9	-	.187 05	.443	1.000	2.030	1.747	1.172	.194	.224	.053	F4
9	49.8N 78.1E	67 03 25	5.1	-	.659 04	.211	1.000	2.038	1.454	1.298	.106	.043	(.006)N	F4
10	49.7N 78.1E	67 04 20	5.4	-	.996 04	.285	1.000	2.396	1.627	1.498	.300	.130	.056	F4
11	49.8N 78.0E	67 05 28	5.2	-	.732 04	.192	1.000	1.939	1.561	1.259	.134	.083	.020	F4
12	49.7N 78.0E	67 06 29	5.1	-	.355 04	.222	1.000	2.058	1.100	.427	.126	.029	.010	F2
13	49.8N 78.1E	67 07 15	5.2	-	.506 04	.193	1.000	2.321	1.977	2.152	.279	.069	.015	F4
14	49.8N 78.0E	67 08 04	5.1	-	.521 04	.179	1.000	2.309	2.023	1.129	.142	.040	(.004)N	F4
15	50.0N 77.7E	67 09 16	5.0	-	.318 04	.447	1.000	2.382	1.767	1.364	.310	.030	(.010)N	F4
16	49.9N 77.7E	67 09 22	4.9	-	.302 04	.246	1.000	2.078	1.711	.956	.251	.037	(.019)N	F4
17	57.7N 65.3E	67 10 06	4.7	-	.108 04	.260	1.000	.810	1.488	.536	.312	(.166)N	(.045)N	F1
18	49.8N 78.0E	67 10 17	5.4	-	.117 05	.194	1.000	2.313	1.337	1.046	.191	.099	.035	F4
19	73.4N 54.8E	67 10 21	5.8	-	.139 05	.387	1.000	1.561	1.848	.433	.299	.090	.015	F4
20	49.8N 78.0E	67 10 30	5.2	-	.663 04	.181	1.000	2.486	1.758	1.134	.223	.093	.027	F4
21	50.0N 77.7E	67 11 22	4.1	-	.470 03	(.666)N	1.000	1.829	1.772	.857	.249	.094	.035	F4
22	49.8N 78.2E	67 12 08	5.1	-	.518 04	.317	1.000	1.902	1.945	2.073	.326	.076	.020	F4
23	49.8N 78.0E	68 01 07	4.7	-	.223 04	(.202)N	1.000	2.496	2.091	1.133	.196	.034	(.012)N	F4
24	49.8N 78.1E	68 04 24	4.6	-	.144 04	(.230)N	1.000	3.209	2.409	2.400	.628	.049	(.016)N	F4

No.	Epicenter	Origin Time YR MO DY	m_b	Depth	$A^{1.0}_{.6}$	r_1 (.4-.6)	r_2 (.6-1.0)	r_3 (1.0-1.4)	r_4 (1.4-2.0)	r_5 (2-3)	r_6 (3-4.5)	r_7 (4.5-6)	r_8 (6-9)	Subarray
25	38.8N 65.1E	68 05 21	5.3	-	.112 05	.079	1.000	1.444	.476	.348	.057	(.006)N	(.003)N	F4
26	49.8N 78.1E	68 06 11	5.0	-	.429 04	.254	1.000	2.308	1.809	1.060	.247	.031	(.008)N	F4
27	50.0N 79.1E	68 06 19	5.3	-	.689 04	.454	1.000	1.122	1.531	.914	.092	.026	(.005)N	F4
28	47.9N 47.8E	68 07 01	5.4	-	.136 05	.176	1.000	.916	.710	.485	.137	.017	.005	F4
29	49.8N 78.1E	68 07 12	5.0	-	.396 04	.216	1.000	2.348	1.841	1.892	.403	.057	.016	F4
30	50.0N 78.0E	68 08 20	4.5	-	.107 04	(.125)N	1.000	2.908	2.626	2.128	.475	(.056)N	(.015)N	F4
31	49.8N 78.1E	68 09 29	5.7	-	.157 05	.321	1.000	1.972	1.605	1.213	.145	.180	.050	F4
32	73.4N 54.9E	68 11 07	5.9	-	.199 05	.457	1.000	1.590	1.605	.262	.228	.093	.012	F4
33	49.8N 78.0E	68 11 09	4.3	-	.124 04	.226	1.000	1.968	1.834	1.692	.308	(.045)N	(.018)N	F4
34	49.7N 78.1E	68 12 18	4.9	-	.177 04	.157	1.000	2.253	1.600	.879	.169	.033	(.013)N	F4
35	49.8N 78.1E	69 03 07	5.4	-	.112 05	.238	1.000	1.732	1.355	1.492	.223	.150	.040	F4
157	51.4N 179.2E	65 10 29	6.1	-	.761 04	.195	1.000	3.840	1.722	.325	.446	.097	.030	F4
158	24.1N 5.2E	65 12 01	5.1	-	.756 03	.395	1.000	2.066	3.045	1.249	.092	(.037)N	(.028)N	F4
159	37.1N 116.0W	67 09 27	4.6	-	.964 04	.393	1.000	.225	.074	.060	(.033)N	(.014)N	(.004)N	F4
160	36.7N 107.2W	67 12 10	5.1	-	.710 04	.287	1.000	1.058	.518	1.240	.533	.105	.017	F4
161	37.3N 116.5W	68 04 26	6.3	-	.162 05	.936	1.000	.371	.110	.057	.060	.011	.0005	F4
162	37.1N 116.0W	68 09 06	5.6	-	.342 04	1.123	1.000	3.392	.456	.135	.076	.029	.012	F4
163	37.2N 116.5W	68 12 19	6.3	-	.198 05	.993	1.000	.284	.668	.049	.025	.006	.0005	F4

Table 3 (Cont.) Earthquakes

No.	Epicenter	Origin Time YR MO DY	m_b	Depth	$A^{1.0}_{.6}$	r_1 (.4-.6)	r_2 (.6-1.0)	r_3 (1.0-1.4)	r_4 (1.4-2.0)	r_5 (2-3)	r_6 (3-4.5)	r_7 (4.5-6)	r_8 (6-9)	Subarray
90	51.2N 178.9E	65 10 01	4.8	24	.940 03	.562	1.000	1.433	1.065	(.241)N	(.162)N	(.067)N	(.041)N	F3
92	43.8N 87.7E	65 11 13	6.4	29	.117 05	1.483	1.000	1.292	.489	.396	.075	.021	.005	F4
93	39.3N 73.1E	66 01 28	5.3	41	.347 04	.305	1.000	.802	.154	.077	(.012)N	(.008)N	(.19)N	F4
94	29.8N 69.7E	66 02 07	6.0	10	.205 04	.415	1.000	.913	.373	.229	(.026)N	(.018)N	(.039)N	F4
95	13.9N 146.1E	66 05 20	6.0	69	.575 04	.580	1.000	.297?	.169?	.046?	(.004)N	(.002)N	(.004)N	F4
96	55.0N 165.7E	66 05 20	5.2	35	.442 04	.577	1.000	.574	.206	.195	.051	(.005)N	(.004)N	F4
97	6.4S 131.1E	66 05 25	5.6	57	.744 03	(.567)N	1.000	.825	.773	.626	(.123)N	(.032)N	(.022)N	F4
98	34.0N 77.0E	66 06 04	5.7	215	.397 04	.215	1.000	1.544	1.312	.423	.053	(.005)N	(.005)N	F4
100	43.6N 132.2E	66 06 30	5.4	476	.397 03	.463	1.000	1.527	.972	.402	.264	(.050)N	(.061)N	F4
101	12.6N 144.2E	66 07 07	5.3	46	.987 03	.321	1.000	.603	.217	(.049)N	(.019)N	(.012)N	(.018)N	F4
102	36.4N 141.7E	66 08 19	5.5	28	.346 04	.350	1.000	1.446	(.532)N	(.157)N	(.064)N	(.057)N	(.011)N	F4
103	46.6N 144.1E	66 09 10	5.2	344	.435 04	.248	1.000	.995	1.038	.407	(.080)N	(.012)N	(.006)N	F4
104	45.7N 26.3E	66 10 15	4.8	140	.925 03	.757	1.000	.910	.765	1.011	.065	.022	(.024)N	F4
105	39.2N 21.2E	66 10 29	5.7	20	.111 05	.500	1.000	.541	.204	.066	(.008)N	(.001)N	(.002)N	F4
106	52.4N 173.0E	66 11 08	4.9	31	.282 04	.291	1.000	.590	.649	.407	.157	.011	(.007)N	F4
107	26.9N 125.5E	66 11 09	5.4	45	.166 04	.446	1.000	.861	.240	.056	(.018)N	(.013)N	(.010)N	F4
109	41.8N 144.1E	66 11 12	5.8	32	.798 04	.672	1.000	.330	.221	.049?	(.017)N	(.008)N	(.004)N	F4
110	35.0N 23.5E	66 11 19	5.3	17	.773 04	.149	1.000	.606	.229	.112	.009	(.003)N	(.002)N	F4
111	40.5N 142.7E	66 11 19	4.9	42	.291 04	.551	1.000	1.624	1.214	.212	(.052)N	(.034)N	(.012)N	F4
112	46.7N 152.5E	66 11 21	5.6	60	.143 05	.248	1.000	.856	.193	.087	.024	.004	(.002)N	F4
113	48.2N 146.7E	66 11 22	5.6	443	.275 05	.235	1.000	.777	.214	.194	.051	.012	.003	F4
91	51.3N 174.0E	65 11 11	5.2	45	.111 04	.702	1.000	1.033	.396	.321	.010	(.014)N	).018)N	F3

Table 4

I USSR Explosions

Group	m_b	$A^{1.0}_{.6}$		$\bar{r}_1$	$\bar{r}_2$	$\bar{r}_3$	$\bar{r}_4$	$\bar{r}_5$	$\bar{r}_6$	$\bar{r}_7$	$\bar{r}_8$	No.
A	5.7	.1 - .5	05	.304	1.000	1.649	1.367	.814	.198	.115	.026	(10)
B	5.3	.500 - .499	04	.256	1.000	2.133	1.816	1.461	.216	.079	≤.018	(10)
C	4.8	.100 - .499	04	≤.235(9)	1.000	2.257	1.843	1.315	.311	≤.040(8)	≤.017(2)	(11)
D	-	.500 - .999	03	[.220]	1.000	[2.500]	[2.000]	[1.500]	[.375]	[.040]	[.030]	(1)
E	4.3	.100 - .499	03	.200	1.000	2.742	2.191	1.662	.441	.0543(2)	.0480(2)	(3)

[ ] = interpolated values

II Shallow Focus Earthquakes (D < 100 km)

Group	m_b	$A^{1.0}_{.6}$		$\bar{r}_1$	$\bar{r}_2$	$\bar{r}_3$	$\bar{r}_4$	$\bar{r}_5$	$\bar{r}_6$	$\bar{r}_7$	$\bar{r}_8$	No.
A		.1 - .5	05	.744	1.000	.896	.295	.183	<.036(2)	<.009(2)	<.003(1)	(3)
B		.5 - .999	04	.467	1.000	.411	.206	.069	<.010(1)	<.004(0)	≤.003(0)	(3)
C		.100 - .499	04	.319	1.000	.973	≤.481(6)	.189(5)	<.054(2)	.011(1)	(0)	(7)
D		.500 - .999	03	<.483(2)	1.000	.954	.685	<.305(1)	(0)	(0)	(0)	(3)
E		.100 - .499	03									(0)

III Noise Means

	$\bar{r}_5$	$\bar{r}_6$	$\bar{r}_7$	$\bar{r}_8$
	.32 03	.11 03	.041 03	.027 03

Table 5

A. $A^{1.0}_{.6} \geq .1 \times 10^5$

$$D = -5.424\, r_{1j} - 1.649\, r_{2j} + r_{3j} + 1.206\, r_{4j} + 2.026\, r_{5j} + 8.328\, r_{6j} + 14.34\, r_{7j} + 63.42\, r_{8j}$$

Explosions	Earthquakes	
D_1 (2+6) = 10.37	D_{92} (2+6) = -5.77	depth = 29 km
D_5 (2+6) = 3.55	D_{105}(2+3) = -3.44	20
D_8 (2+6) = 10.66		
D_{18} (2+6) = 8.57	D_{112}(2+5) -1.47	60
D_{19} (2+6) = 5.65	D_{113}(2+6) -0.71	443
D_{25} (2+6) = 1.12		
D_{28} (2+6) = 2.77		
D_{31} (2+6) = 9.93		
D_{32} (2+6) = 3.92		
D_{35} (2+6) = 9.99		

Table 5 (cont.)

B. $.5 \times 10^4 < A^{1.0}_{.6} < .1 \times 10^5$

$$D = -8.332\, r_{1j} - 2.133\, r_{2j} + r_{3j} + 1.176 r_{4j} + 1.460\, r_{5j} + 9.875 r_{6j} + 27.00 r_{7j} + 118.5\, r_{8j}$$

Explosions	Earthquakes	
D_4 (2+6) = 10.46	D_{95} (2+3) = -6.40	depth = 69 km
D_7 (2+6) = 13.39	D_{109}(2+3) = -7.07	32
D_9 (2+5) = 3.96	D_{110}(2+4) = -2.25	17
D_{10} (2+6) = 15.08		
D_{11} (2+6) = 7.81		
D_{13} (2+6) = 10.44		
D_{14} (2+5) = 5.19		
D_{20} (2+6) = 10.48		
D_{22} (2+6) = 10.08		
D_{27} (2+5) = -.05		

Table 5 (cont.)

C. $.1 \times 10^4 < A^{1.0}_{.6} < .5 \times 10^4$

$$D = -9.604r_{1j} - 2.257r_{2j} + r_{3j} + 1.225r_{4j} + 1.716r_{5j} + 7.257r_{6j} + 56.43r_{7j} + 132.8r_{8j}$$

Explosions	Earthquakes	
D_{12} (2+6)= 3.63	D_{93} (2+3) = -4.06	depth = 41 km
D_{15} (2+5)= 4.28	D_{94} (2+6) = -5.33	10
D_{16} (2+5)= 5.10	D_{96} (2+4) = -6.64	35
D_{17} (2+4)= 1.06	D_{98} (2+4) = - .06	215
D_{23} (2+5)= 6.15(Using N at r_{1j})	D_{102}(2+1) = -4.17	28
D_{24} (1+5)= 13.13(Using N at r_{1j})	D_{103}(2+3) = -1.67	344
D_{26} (2+5)= 5.19	D_{106}(2+5) = -1.21	31
D_{29} (2+6)= 11.78	D_{107}(2+3) = -5.29	45
D_{30} (1+4)= 9.77(Using N at r_{1j})	D_{111}(2+3) = -4.07	42
D_{33} (2+4)= 4.93	D_{91} (2+5) = -6.86	45
D_{34} (2+5)= 5.05		

Table 5 (cont.)

D. $.5 \times 10^3 < A^{1.0}_{.6} < .1 \times 10^4$

$D = -11.3r_{1j} - 2.500r_{2j} +_{3j} + 1.250r_{4j} + 1.667r_{5j} + 6.667r_{6j}$
$+ 62.50r_{7j} + 83.33r_{8j}$

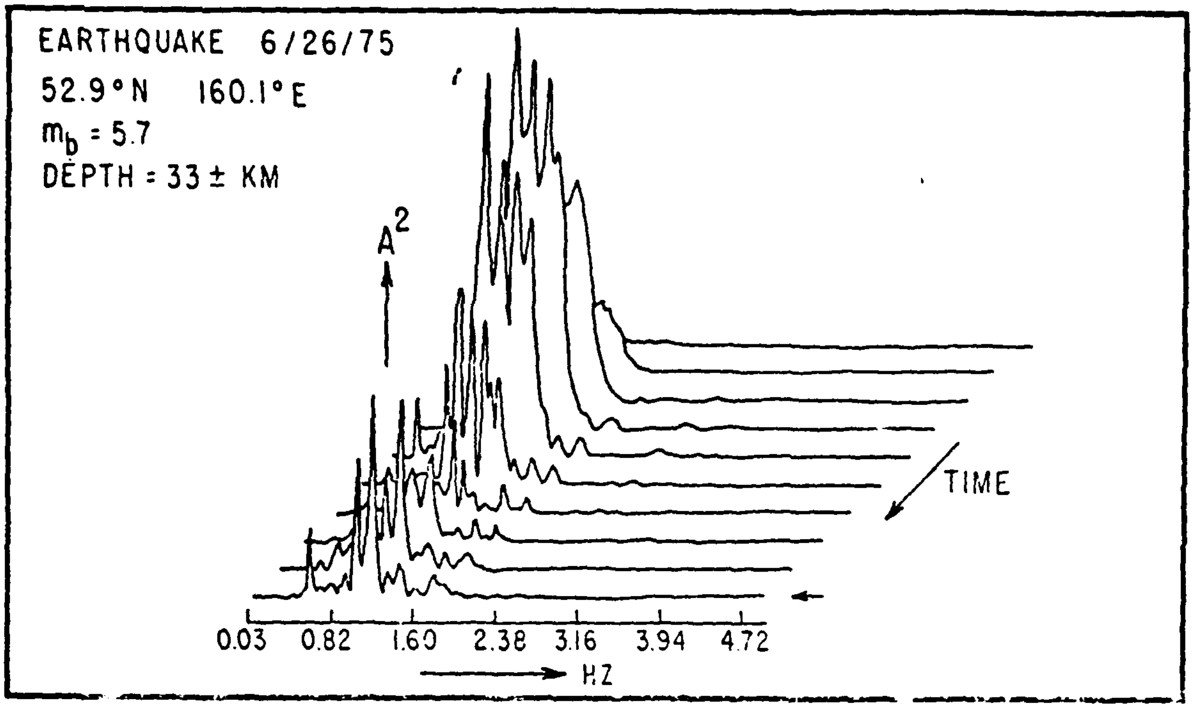
Explosions	Earthquakes	
$D_{158}(2+4) = 1.82$ (Algeria)	$D_{90}\ (2+2) = -5.88$	depth = 24 km
	$D_{97}(1+3) = -5.10$*	57
	$D_{101}(2+2) = -5.03$	46
	$D_{104}(2+5) = -5.50$	140

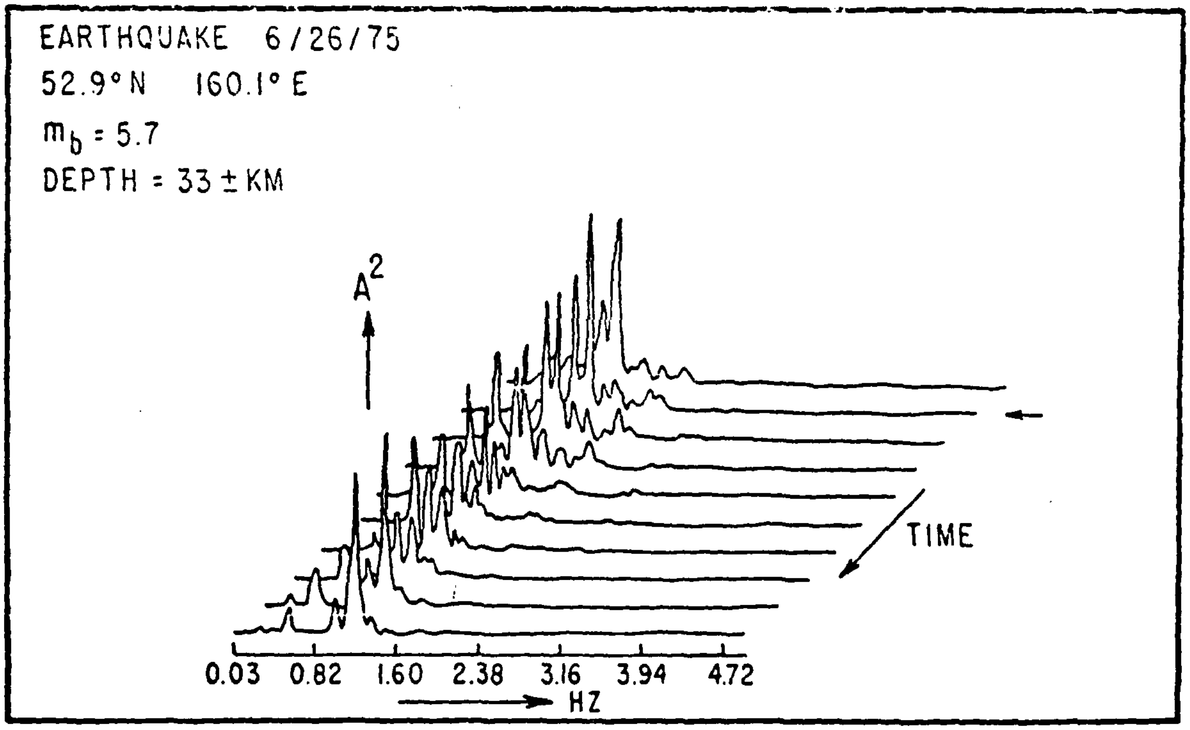
*Using .5 at r_{1j}

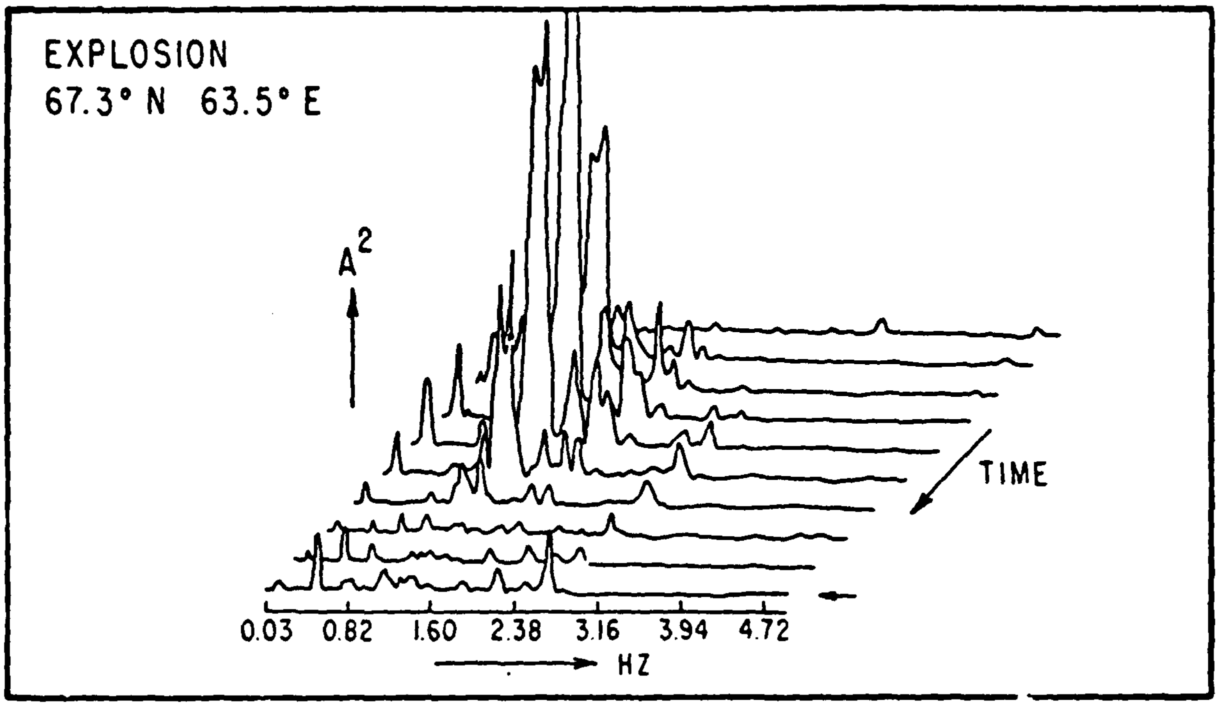
E. $.1 \times 10^3 < A < .5 \times 10^3$

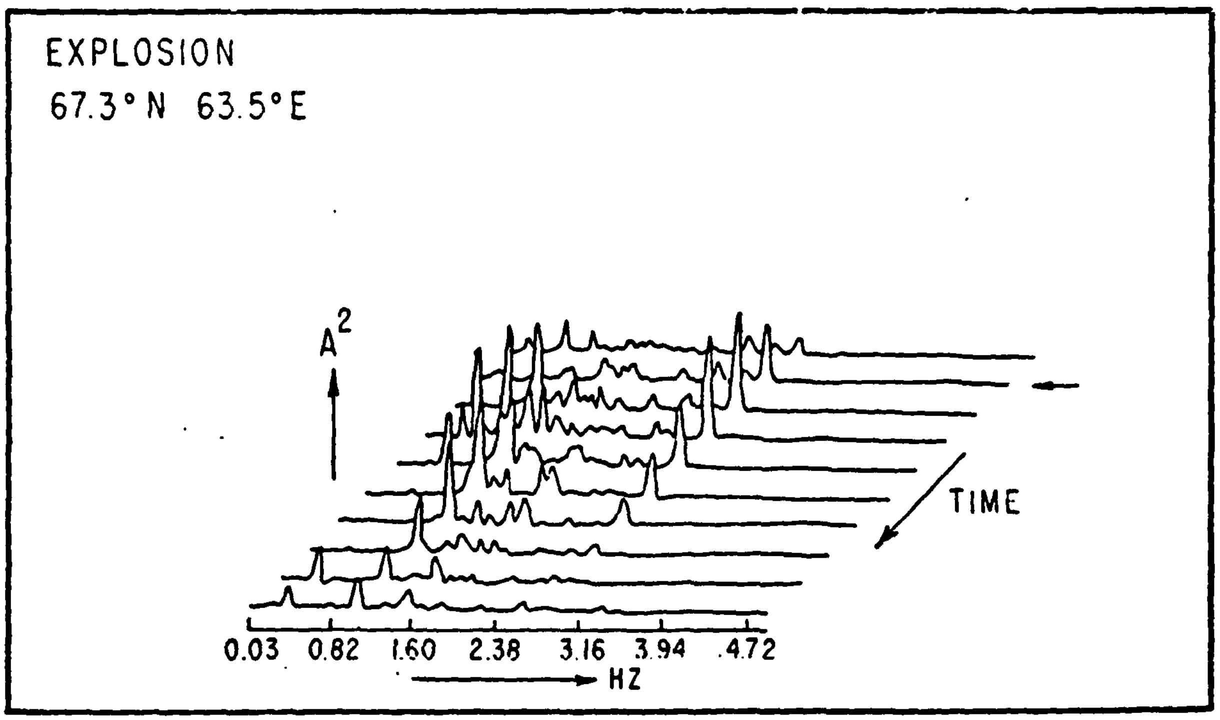
$D = -13.715r_{1j} - 2.742r_{2j} + r_{3j} + 1.251r_{4j} + 1.650r_{5j}$
$+ 6.667r_{6j} + 50.50r_{7j} + 57.13r_{8j}$

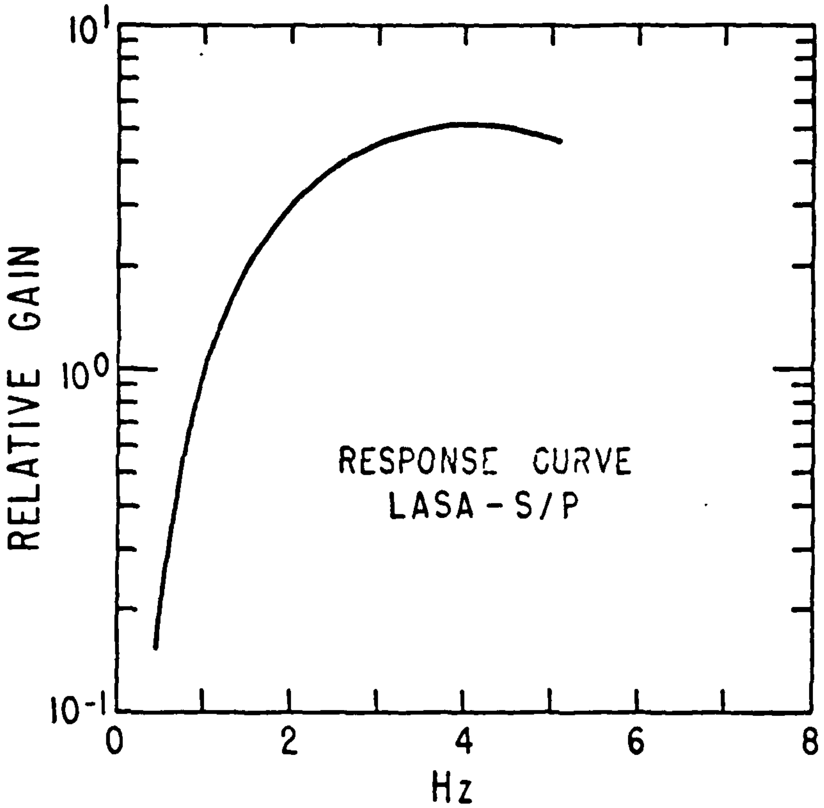
Explosions	Earthquakes
$D_3\ (1+4) = 7.25$ (Using N at r_{1j})	$D_{100}(2+4) = -3.44$ depth ≈ 476 km
$D_6\ (1+6) = 13.23$ (Using N at r_{1j})	
$D_{21}(1+6) = 8.18$ (Using $r_{1j} = .25$)	


EARTHQUAKE 6/26/75
52.9°N 160.1°E
m_b = 5.7
DEPTH = 33 ± KM
A^2
TIME
0.03 0.82 1.60 2.38 3.16 3.94 4.72
HZ

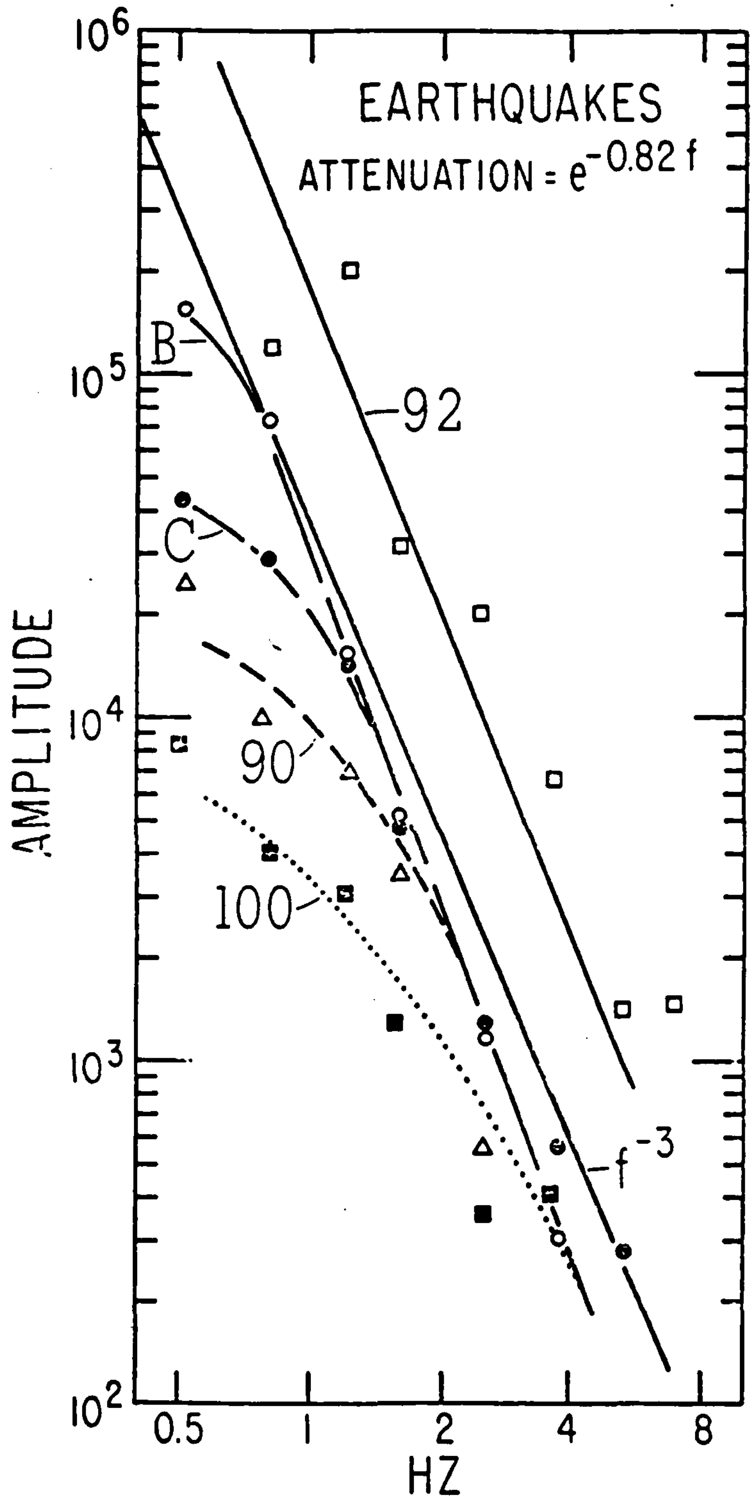

EARTHQUAKE 6/26/75
52.9°N 160.1°E
m_b = 5.7
DEPTH = 33 ± KM
A^2
TIME
0.03 0.82 1.60 2.38 3.16 3.94 4.72
HZ

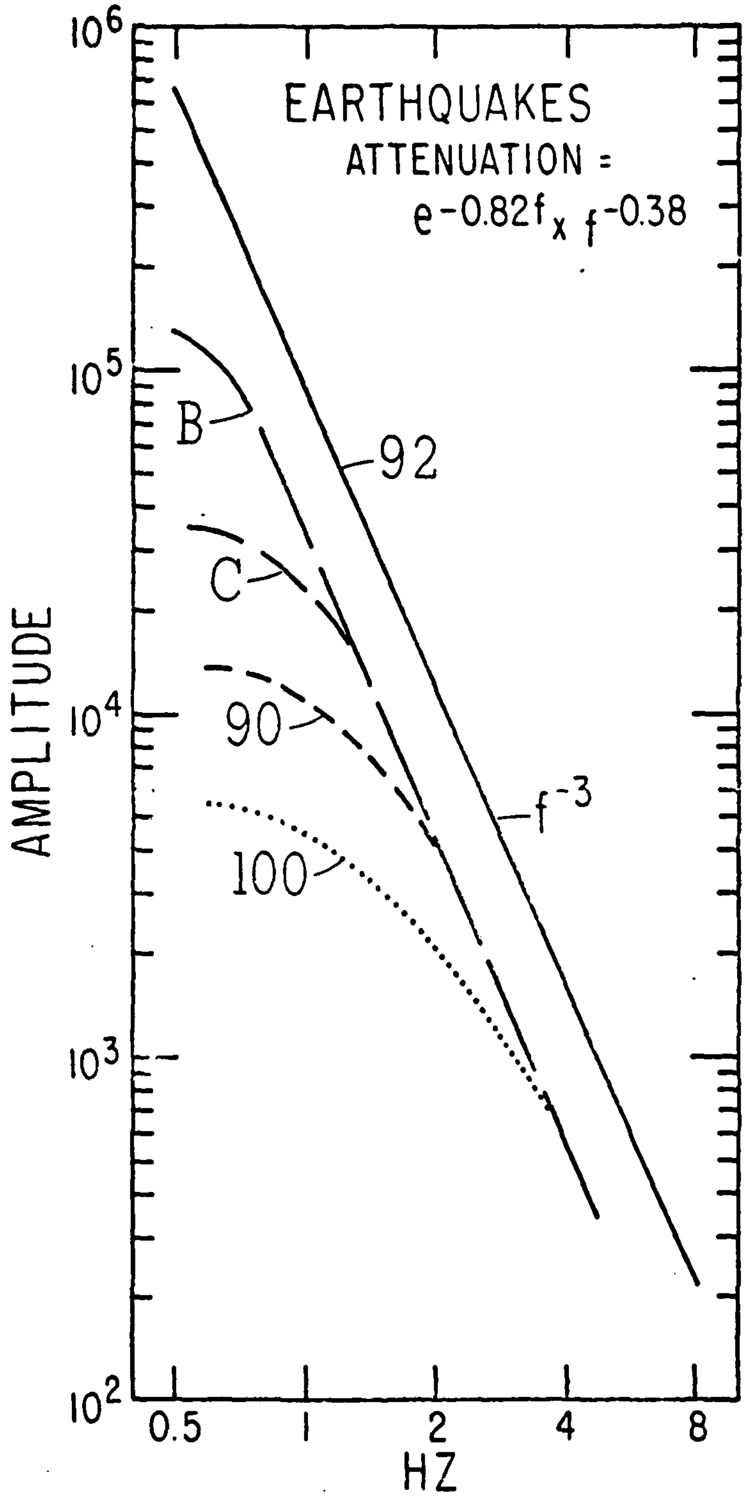

EXPLOSION
67.3° N 63.5° E
A2
TIME
0.03 0.82 1.60 2.38 3.16 3.94 4.72
HZ


EXPLOSION
67.3° N 63.5° E
A2
TIME
0.03 0.82 1.60 2.38 3.16 3.94 .4.72
HZ

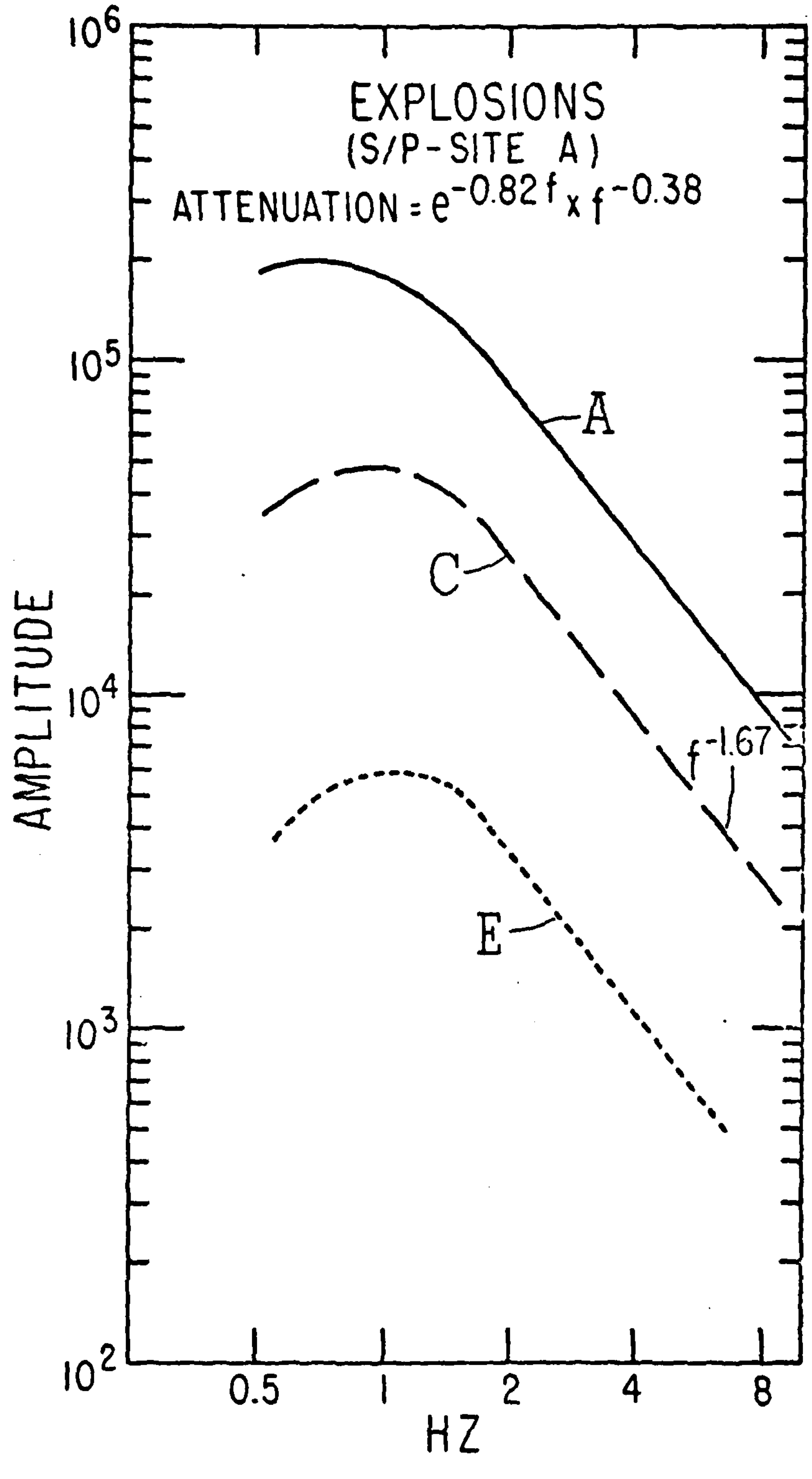


RELATIVE GAIN
10^1
10^0
10^{-1}
RESPONSE CURVE
LASA - S/P
0
2
4
6
8
Hz


EARTHQUAKES
ATTENUATION = $e^{-0.82f}$
AMPLITUDE
HZ
B
C
92
90
100
f^{-3}
10^6
10^5
10^4
10^3
10^2
0.5
1
2
4
8

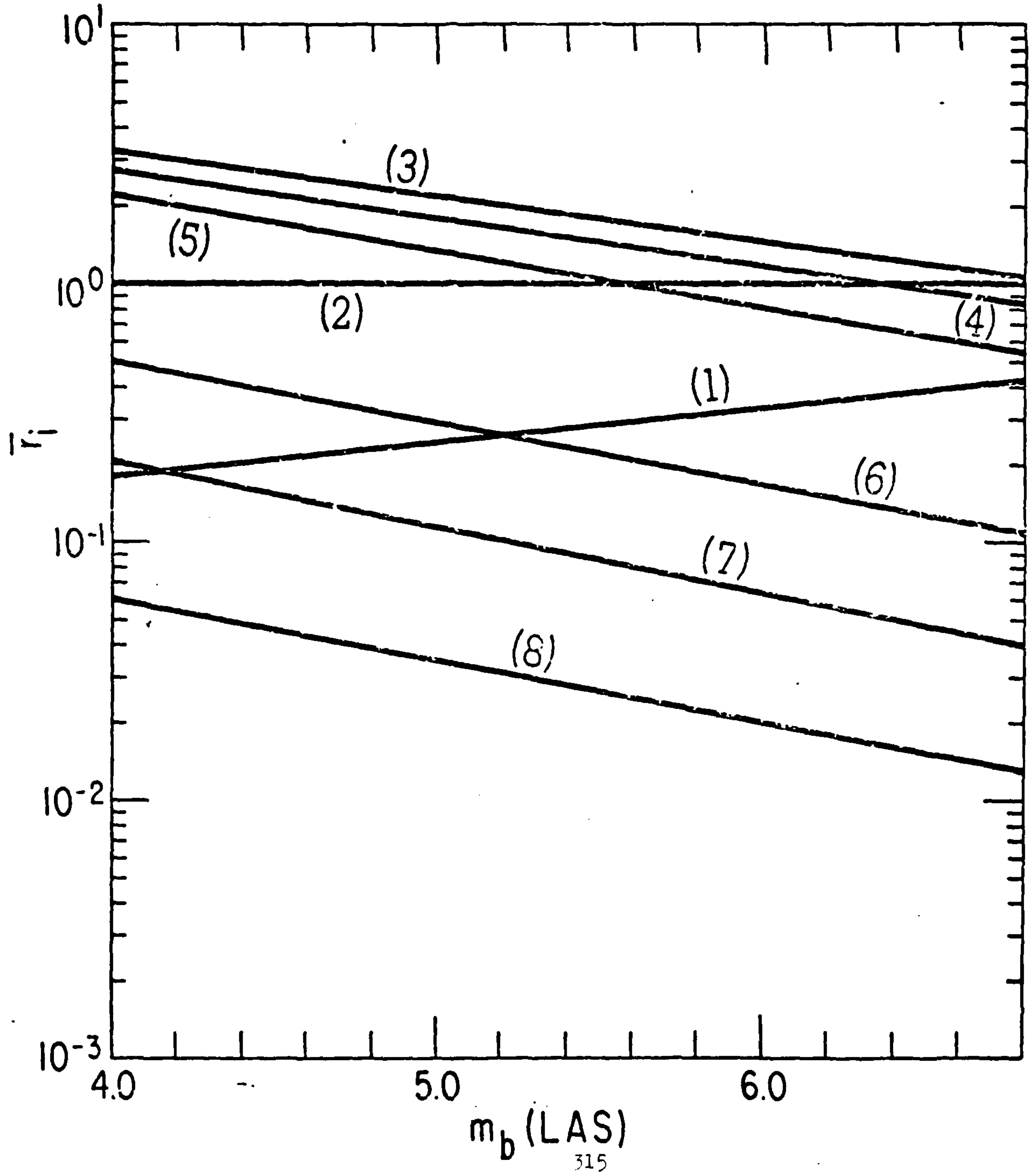


EARTHQUAKES
ATTENUATION =
e-0.82f x f-0.38
B
92
C
90
f-3
100
AMPLITUDE
10^6
10^5
10^4
10^3
10^2
0.5
1
2
4
8
HZ



EXPLOSIONS
(S/P-SITE A)
ATTENUATION = $e^{-0.82f} \times f^{-0.38}$
A
C
E
$f^{-1.67}$
AMPLITUDE
10^6
10^5
10^4
10^3
10^2
0.5
1
2
4
8
HZ

SMOOTHED $\overline{r}_i$ VALUES vs. MAGNITUDE (m_b)



Appendix C

Earthquake and Explosion Data Sets

Appendix C

Earthquake and Explosion Data Sets

During the course of this investigation a large quantity of data has been obtained. Because many of these data were acquired with no mean effort, we have compiled them onto several tapes and thus hope to provide others with a more easily accessible data base. We have attempted to format the data in a way that would allow the non-computer expert to use them with ease. There are two data sets: the data supplied by ACDA an the data obtained through Col. Ives and CDC.

ACDA data:

These data are recorded in ascii on 9 track tapes at a density of 800 bpi. Every record is 512 bytes long and eight ascii characters make up one word. None of the tapes contains any computer system dependant records. An end of file mark terminates the data on each tape. For each seismogram the first record is a header record containing the following information:

total number of records of data to follow

event identification number

date - month

date - day

date - year

site identification (alpha-numeric)

number of channels of data

total number of data points on seismogram

sampling rate in samples per second

time of first data point - hours

time of first data point - minutes

time of first data point - seconds.

The subsequent records contain the data. Each integer data point is recorded as 8 ascii characters and may have leading blanks and a minus sign.

These data have been divided into two sets: type A data or earthquakes and type B data, which are explosions. In the following pages the headers for all of these data are listed.

CDC data

These data are recorded in ascii on 9 track tapes at a density of 800 bpi. Each record is 1920 bytes long. For each seismogram there is a header the format of which is described in Table 1. The header does not constitute a separate record. Subsequent information is the 1200 data points which are in 8 character ascii format. Again, each data point may contain leading blanks and an optional minus sign. An end of file mark terminates the data on each tape. A listing of the headers for all of the seismograms in this data set is included as part of this report.

The user should take care to apply the appropriate sampling rates to these data. Data recored prior to 15 April 1969 were sampled at 20 Hz and data obtained

subsequent to that data were sampled at 10 Hz.

TABLE 1

Description of CDC Data Format

Each record of 1920 bytes is subdivided into 20 segments containing 96 characters. There are five types of segments.

Type 1 - Header

Description	Format	Byte
Record number	I3	1-3
Event number	I6	4-9
Space	1x	10
Channel type	A2	11-12
Year	I3	13-15
Month	I3	16-18
Day	I3	19-21
Julian Date	I8	22-29
Latitude	F5.1	30-34
Space	1x	35
Latitude direction	A1	36
Longitude	F6.1	37-42
Space	1x	43
Longitude direction	A1	44
Seismic Region number	I3	45-47
Geographic Region number	I4	48-51
Depth	F4.0	52-55
Depth	I4	56-59
Distance in degrees	F7.1	60-66

Azimuth	F8.1	67-74
Arrival time - hour	I3	75-77
Arrival time - minute	I3	78-80
Arrival time - second	F5.1	81-85
Origin time - hour	I3	86-88
Origin time - minute	I3	89-91
Origin time - second	F5.1	92-96

Type 2 - Description Format - 6A10

Description	Byte
Event number	1-6
Channel type	8-9
Date	14-21
Julian date	25-31
Latitude	35-40
Longitude	44-50
Magnitude	54-56

Type 3 - Description

Format - 6A10

Description	Byte
Depth	1-3
Distance	7-11
Azimuth	15-20
Arrival time	24-33
Origin time	37-46
Designator	50-59

Type 4 - Description

Format - 7A10,A2

Description	Byte
Seismic region number	1-2
Seismic name	4-35
Geographic region number	37-39
Geographic name	41-72

Type 5 - Data

Format - 12I8

This segment is repeated 100 times to write 1200 data points.

Headers for ACDA Data - Earthquakes

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	71	6	29	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	18	37		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	72	6	29	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	13	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	D2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	D3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	73	6	29	75	D4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	12	33	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	A0	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	B1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	B2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	B3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	B4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	C1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	C2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	C3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	C4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	74	6	28	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	49	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	75	6	28	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	4	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	76	6	28	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	57	35		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	2[illegible]	75	B1	1
LENGTH	SR	HOUR	MINU[illegible]	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	77	6	28	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	16	43	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	78	6	28	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
2999	10	18	4	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	[illegible]	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	B4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	C1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	C2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	C3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	C4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	D1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	D2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	D3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	27	75	D4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	6	10	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	A0	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	B1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	B2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	B3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	B4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	C1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	C2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	C3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	C4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	D1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	D2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	D3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	80	6	26	75	D4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	7	40	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	81	6	26	75	A0	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	8	16	23		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	81	6	26	75	B1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	8	16	23		

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    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       B2        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       B3        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       B4        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       C1        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       C2        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       C3        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       C4        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       D1        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       D2        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       D3        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      47      81         6       26       75       D4        1
  LENGTH      SR      HOUR   MINUTE      SEC
    3001      10         8       16       23

    NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
      38      82         6       26       75       A0        1
  LENGTH      SR      HOUR   MINUTE      SEC
    2401      10         9       27       44
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	82	6	26	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
2401	10	9	27	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	2	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	83	6	26	75	D4	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	10	2	2

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	A0	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	B1	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	B2	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	B3	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	B4	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	C1	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	C2	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	C3	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	C4	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	D1	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	D2	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	13	16	5

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	16	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	84	6	26	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	16	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	D2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	D3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	85	6	26	75	D4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	7	24		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	A0	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	B1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	B2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	B3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	B4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	C1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	C2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	C3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	C4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	86	6	26	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	36	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	87	6	25	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	39	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	88	6	25	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	88	6	25	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	88	6	25	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	88	6	25	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	88	6	25	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	88	6	25	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	88	6	25	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	25		

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     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      88         6        25       75        C3         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        16        30       25

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      88         6        25       75        C4         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        16        30       25

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      88         6        25       75        D1         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        16        30       25

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      88         6        25       75        D2         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        16        30       25

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      88         6        25       75        D3         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        16        30       25

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      88         6        25       75        D4         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        16        30       25

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      89         6        25       75        A0         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        19         1       33

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      89         6        25       75        B1         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        19         1       33

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      89         6        25       75        B2         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        19         1       33

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      89         6        25       75        B3         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        19         1       33

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      89         6        25       75        B4         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        19         1       33

     NREC      ID     MONTH       DAY     YEAR      SITE     NCHAN
       47      89         6        25       75        C1         1
   LENGTH      SR      HOUR    MINUTE      SEC
     3001      10        19         1       33
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	89	6	25	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	19	1	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	89	6	25	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	19	1	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	89	6	25	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	19	1	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	89	6	25	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	19	1	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	89	6	25	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	19	1	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	89	6	25	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	19	1	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	89	6	25	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	19	1	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	90	6	23	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	22	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	91	6	22	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	32	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	91	6	22	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	32	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	91	6	22	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	32	58		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	91	6	22	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	32	58		

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   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      91         6        22        75       B4         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         4        32        58

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      91         6        22        75       C1         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         4        32        58

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      91         6        22        75       C2         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         4        32        58

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      91         6        22        75       C3         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         4        32        58

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      91         6        22        75       C4         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         4        32        58

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      91         6        22        75       D1         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         4        32        58

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      91         6        22        75       D2         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         4        32        58

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      91         6        22        75       D3         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         4        32        58

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      91         6        22        75       D4         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         4        32        58

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      92         6        21        75       A0         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10        16        30        20

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      92         6        21        75       B1         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10        16        30        20

   NREC      ID     MONTH       DAY      YEAR     SITE     NCHAN
     47      92         6        21        75       B2         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10        16        30        20
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	92	6	21	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	93	6	16	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	26	31		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	94	6	15	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	9	33		

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     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       B1        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       B2        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       B3        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       B4        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       C1        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       C2        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       C3        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       C4        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       D1        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       D2        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       D3        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33

     NREC      ID     MONTH      DAY      YEAR     SITE    NCHAN
       47      94         6       15        75       D4        1
   LENGTH      SR      HOUR   MINUTE       SEC
     3001      10        14        9        33
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	95	6	14	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	37	39		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	96	6	10	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	34	32		

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  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      96         6       10       75       D3        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         6       34       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      96         6       10       75       D4        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         6       34       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       A0        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       B1        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       B2        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       B3        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       B4        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       C1        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       C2        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       C3        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       C4        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      79         6       10       75       D1        1
LENGTH      SR      HOUR   MINUTE      SEC
  3001      10         8       53       17
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	10	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	8	53	17		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	10	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	8	53	17		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	79	6	10	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	8	53	17		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	98	6	9	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	51	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	99	6	9	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	29	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	100	6	9	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	13	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	101	6	8	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	10	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	101	6	8	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	10	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	101	6	8	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	10	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	101	6	8	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	10	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	101	6	8	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	10	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	101	6	8	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	10	34		

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   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     101         6        8       75       C2        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         5       10       34

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     101         6        8       75       C3        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         5       10       34

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     101         6        8       75       C4        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         5       10       34

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     101         6        8       75       D1        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         5       10       34

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     101         6        8       75       D2        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         5       10       34

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     101         6        8       75       D3        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         5       10       34

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     101         6        8       75       D4        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         5       10       34

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     102         6        8       75       A0        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10        18       44       55

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     102         6        8       75       B1        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10        18       44       55

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     102         6        8       75       B2        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10        18       44       55

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     102         6        8       75       B3        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10        18       44       55

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     102         6        8       75       B4        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10        18       44       55
```

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	102	6	8	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	18	44	55		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	102	6	8	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	18	44	55		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	102	6	8	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	18	44	55		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	102	6	8	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	18	44	55		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	102	6	8	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	18	44	55		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	102	6	8	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	18	44	55		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	102	6	8	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	18	44	55		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	102	6	8	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	18	44	55		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	D3	1
LENGTH-	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	103	6	7	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	9	50		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	104	6	7	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	39	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	7	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	47	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	105	6	[illegible]	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	[illegible]	28		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	1	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	106	6	6	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	11	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	107	6	4	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	36	6		

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NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      B1       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      B2       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      B3       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      B4       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      C1       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      C2       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      C3       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      C4       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      D1       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      D2       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      D3       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6

NREC     ID    MONTH     DAY    YEAR    SITE   NCHAN
  47    107        6       4      75      D4       1
LENGTH   SR     HOUR  MINUTE     SEC
3001     10        2      36       6
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	108	6	4	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	6	6		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	109	6	4	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	7	43		

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   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     109         6         4        75        D3         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3         7        43

   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     109         6         4        75        D4         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3         7        43

   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     110         6         3        75        A0         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3        35        39

   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     110         6         3        75        B1         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3        35        39

   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     110         6         3        75        B2         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3        35        39

   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     110         6         3        75        B3         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3        35        39

   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     110         6         3        75        B4         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3        35        39

   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     110         6         3        75        C1         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3        35        39

   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     110         6         3        75        C2         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3        35        39

   NREC      ID     MONTH       DAY      YEAR      SITE     NCHAN
     47     110         6         3        75        C3         1
 LENGTH      SR      HOUR    MINUTE       SEC
   3001      10         3        35        39

   [illegible] [illegible] MONTH   DAY      YEAR      SITE     NCHAN
                        6         3        75        C4         1
                     [illegible] MINUTE    SEC
                        3        35        39

                               [illegible] YEAR    SITE     NCHAN
                                  3        75        D1         1
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    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     110         6         3        75       D2        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        35        39

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     110         6         3        75       D3        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        35        39

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     110         6         3        75       D4        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        35        39

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     111         6         2        75       A0        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        29        49

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     111         6         2        75       B1        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        29        49

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     111         6         2        75       B2        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        29        49

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     111         6         2        75       B3        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        29        49

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     111         6         2        75       B4        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        29        49

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     111         6         2        75       C1        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        29        49

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     111         6         2        75       C2        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        29        49

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     111         6         2        75       C3        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        29        49

    NREC      ID     MONTH       DAY      YEAR     SITE    NCHAN
      47     111         6         2        75       C4        1
  LENGTH      SR      HOUR    MINUTE       SEC
    3001      10         3        29        49
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 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    111        6        2      75      D1        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10        3       29      49

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    111        6        2      75      D2        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10        3       29      49

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    111        6        2      75      D3        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10        3       29      49

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    111        6        2      75      D4        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10        3       29      49

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    112        5       31      75      A0        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10       14       26      47

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    112        5       31      75      B1        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10       14       26      47

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    112        5       31      75      B2        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10       14       26      47

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    112        5       31      75      B3        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10       14       26      47

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    112        5       31      75      B4        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10       14       26      47

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    112        5       31      75      C1        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10       14       26      47

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    112        5       31      75      C2        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10       14       26      47

 NREC     ID    MONTH      DAY    YEAR    SITE    NCHAN
   47    112        5       31      75      C3        1
LENGTH    SR     HOUR   MINUTE     SEC
 3001     10       14       26      47
```

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	112	5	31	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	26	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	112	5	31	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	26	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	112	5	31	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	26	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	112	5	31	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	26	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	112	5	31	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	26	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	113	5	30	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	58	33		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	114	5	26	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	21	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	115	5	21	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	14	15	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	116	5	20	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	13	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	117	5	19	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	36	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	118	5	18	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	6	7	45		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	119	5	17	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	19	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
300	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	120	5	16	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	1	36	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	121	5	14	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	34	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
51	122	5	13	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3201	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	122	5	13	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	122	5	13	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	122	5	13	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	122	5	13	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	122	5	13	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	122	5	13	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	122	5	13	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	122	5	13	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
51	122	5	13	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3201	10	0	33	20		

AD-A107 584 NAVAL POSTGRADUATE SCHOOL MONTEREY CA F/G 17/10
APPLICATION OF ACOUSTIC SIGNAL PROCESSING TECHNIQUES TO SEISMIC--ETC(U)
JUN 77 C E IRVINE
UNCLASSIFIED NPS-52IR77061 NL

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
51	122	5	13	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3201	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
51	122	5	13	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3201	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
51	122	5	13	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3201	10	0	33	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	123	5	13	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	36	8		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	124	5	12	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	1	36		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	125	5	11	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	30	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	126	5	11	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	22	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	127	5	7	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	17	54	56		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	128	5	5	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	30	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	129	5	3	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	24	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	131	4	30	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	39	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	132	4	30	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	53	43		

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   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       B1        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       B2        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       B3        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       B4        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       C1        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       C2        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       C3        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       C4        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       D1        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       D2        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       D3        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43

   NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
     47     132         4       30       75       D4        1
 LENGTH      SR      HOUR   MINUTE      SEC
   3001      10         4       53       43
```

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	A0	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	B1	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	B2	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	B3	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	B4	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	C1	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	C2	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	C3	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	C4	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	D1	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	D2	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	D3	1

LENGTH	SR	HOUR	MINUTE	SEC
3001	10	3	19	32

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	133	4	29	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	19	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	134	4	29	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	47	47		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	135	4	28	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	12	53		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	136	4	28	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	11	18	16		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	137	4	28	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	12	10	7		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	138	4	27	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	21	45	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	C2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	C3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	C4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	D1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	D2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	D3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
57	139	4	25	75	D4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3601	10	1	1	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	A[illegible]	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	B1	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	B2	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	B3	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	B4	1
LENGTH	SP	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	140	4	24	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	8	44		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	141	4	23	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	59	2		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	142	4	23	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	26	54		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	143	4	23	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	23	2		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	144	4	21	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	31	38		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	146	4	15	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	22	46	55		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	147	4	14	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	13	10	12		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	148	4	13	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	14	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	15	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	149	4	13	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	16	30	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	150	4	12	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	0	1	10		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	151	4	9	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	20	6	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
0	151	4	9	75	+	-7936
LENGTH	SR	HOUR	MINUTE	SEC		
0	[illegible]	0	0	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
29	152	4	8	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
1801	10	1	58	43		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	153	4	8	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	58	6		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	154	4	8	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	23	26	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	155	4	10	75	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	3	18	25		

Headers for ACDA Data - Explosions

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	37	3	23	71	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	9	22		

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NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      37         3       23       71      D4        1
LENGTH    SR      HOUR   MINUTE      SEC
3003      10         7        9       22

NREC,     ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      37         3       23       71      E1        1
LENGTH    SR      HOUR   MINUTE      SEC
3003      10         7        9       22

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      37         3       23       71      E2        1
LENGTH    SR      HOUR   MINUTE      SEC
3003      10         7        9       22

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      37         3       23       71      E3        1
LENGTH    SR      HOUR   MINUTE      SEC
3003      10         7        9       22

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      37         3       23       71      E4        1
LENGTH    SR      HOUR   MINUTE      SEC
3003      10         7        9       22

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      37         3       23       71      F1        1
LENGTH    SR      HOUR   MINUTE      SEC
3003      10         7        9       22

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      37         3       23       71      F2        1
LENGTH    SR      HOUR   MINUTE      SEC
3003      10         7        9       22

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      37         3       23       71      F3        1
LENGTH    SR      HOUR   MINUTE      SEC
3003      10         7        9       22

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      37         3       23       71      F4        1
LENGTH    SR      HOUR   MINUTE      SEC
3003      10         7        9       22

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      38         7        2       71      A0        1
LENGTH    SR      HOUR   MINUTE      SEC
3004      10        17        8       49

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      38         7        2       71      B1        1
LENGTH    SR      HOUR   MINUTE      SEC
3004      10        17        8       49

NREC      ID     MONTH      DAY     YEAR    SITE    NCHAN
  47      38         7        2       71      B2        1
LENGTH    SR      HOUR   MINUTE      SEC
3004      10        17        8       49
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	E1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	E2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	E3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	E4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	F1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	38	7	2	71	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	17	8	49		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	E1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	E2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	E3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	E4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	39	7	10	71	F1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	17	9	5		

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  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      39         7       10       71       F2        1
LENGTH      SR      HOUR   MINUTE      SEC
  3005      10        17        9        5

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      39         7       10       71       F3        1
LENGTH      SR      HOUR   MINUTE      SEC
  3005      10        17        9        5

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      39         7       10       71       F4        1
LENGTH      SR      HOUR   MINUTE      SEC
  3005      10        17        9        5

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      40         9       19       71       A0        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10        11        9       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      40         9       19       71       B1        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10        11        9       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      40         9       19       71       B2        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10        11        9       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      40         9       19       71       B3        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10        11        9       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      40         9       19       71       B4        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10        11        9       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      40         9       19       71       C1        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10        11        9       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      40         9       19       71       C2        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10        11        9       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      40         9       19       71       C3        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10        11        9       32

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      40         9       19       71       C4        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10        11        9       32
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	E1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	E2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	E3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	E4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	F1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	40	9	19	71	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	11	9	32		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	41	10	4	71	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	10	9	15		

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      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        41         10         4        71        D4         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3004        10         10         9        15

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        41         10         4        71        E1         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3004        10         10         9        15

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        41         10         4        71        E2         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3004        10         10         9        15

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        41         10         4        71        E3         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3004        10         10         9        15

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        41         10         4        71        E4         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3004        10         10         9        15

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        41         10         4        71        F1         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3004        10         10         9        15

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        41         10         4        71        F2         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3004        10         10         9        15

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        41         10         4        71        F3         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3004        10         10         9        15

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        41         10         4        71        F4         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3004        10         10         9        15

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        42         10        22        71        A0         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3002        10          5        10        40

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        42         10        22        71        B1         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3002        10          5        10        40

      NREC        ID      MONTH       DAY      YEAR      SITE     NCHAN
        47        42         10        22        71        B2         1
    LENGTH        SR       HOUR    MINUTE       SEC
      3002        10          5        10        40
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	E1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	42	10	22	71	E2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	5	10	40		

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  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      42        10       22       71       E3        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10         5       10       40

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      42        10       22       71       E4        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10         5       10       40

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      42        10       22       71       F1        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10         5       10       40

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      42        10       22       71       F2        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10         5       10       40

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      42        10       22       71       F3        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10         5       10       40

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      42        10       22       71       F4        1
LENGTH      SR      HOUR   MINUTE      SEC
  3002      10         5       10       40

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      43        12       22       71       A0        1
LENGTH      SR      HOUR   MINUTE      SEC
  3004      10         7       10       27

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      43        12       22       71       B1        1
LENGTH      SR      HOUR   MINUTE      SEC
  3004      10         7       10       27

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      43        12       22       71       B2        1
LENGTH      SR      HOUR   MINUTE      SEC
  3004      10         7       10       27

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      43        12       22       71       B3        1
LENGTH      SR      HOUR   MINUTE      SEC
  3004      10         7       10       27

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      43        12       22       71       B4        1
LENGTH      SR      HOUR   MINUTE      SEC
  3004      10         7       10       27

  NREC      ID     MONTH      DAY     YEAR     SITE    NCHAN
    47      43        12       22       71       C1        1
LENGTH      SR      HOUR   MINUTE      SEC
  3004      10         7       10       27
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    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        C2         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        C3         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        C4         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        D1         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        D2         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        D3         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        D4         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        E1         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        E2         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        E3         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        E4         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27

    NREC     ID     MONTH       DAY     YEAR      SITE     NCHAN
      47     43        12        22       71        F1         1
  LENGTH     SR      HOUR    MINUTE      SEC
    3004     10         7        10       27
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	43	12	22	71	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	7	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	43	12	22	71	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	7	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	43	12	22	71	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	7	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	E1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	E2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	E3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	E4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	F1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	45	4	11	72	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3002	10	6	12	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	E1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	E2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	E4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	F1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	46	7	9	72	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	10	3		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	47	8	20	72	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	47	8	20	72	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	47	8	20	72	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	20		

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  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      B3        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      B4        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      C1        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      C2        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      C3        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      C4        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      D1        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      D2        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      D3        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      D4        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      E1        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20

  NREC     ID    MONTH     DAY    YEAR    SITE    NCHAN
    47     47        8      20      72      E2        1
LENGTH     SR     HOUR  MINUTE     SEC
  3004     10        3      10      20
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	47	8	20	72	E3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	47	8	20	72	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	47	8	20	72	F1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	47	8	20	72	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	47	8	20	72	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	47	8	20	72	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	20		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	48	9	4	72	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	8	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	48	9	4	72	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	8	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	48	9	4	72	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	8	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	48	9	4	72	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	8	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	48	9	4	72	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	8	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	48	9	4	72	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	8	26		

```
  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      C2       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      C3       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      C4       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      D1       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      D2       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      D3       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      D4       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      F1       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      F2       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      E3       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      E4       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26

  NREC      ID     MONTH      DAY     YEAR    SITE   NCHAN
    47      48         9        4       72      F1       1
LENGTH      SR      HOUR   MINUTE      SEC
  3003      10         7        8       26
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	48	9	4	72	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	8	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	48	9	4	72	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	8	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	48	9	4	72	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3003	10	7	8	26		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	D1	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	D2	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	D3	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	D4	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	F1	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	F2	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	F3	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	F4	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	F1	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	F2	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	F3	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	49	9	21	72	F4	1
LENGTH	**SR**	**HOUR**	**MINUTE**	**SEC**		
3001	10	9	10	9		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	E1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	E2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	E3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	E4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	F1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	50	10	3	72	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	9	10	29		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	F1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	F1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	F2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	F3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	51	11	24	72	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	10	10	19		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	53	8	15	73	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	2	11	5		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	54	8	28	73	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	27		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	55	9	19	73	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	55	9	19	73	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	55	9	19	73	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	51		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	55	9	19	73	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	3	10	51		

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      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        55         9        19       73        B4         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3004        10         3        10       51

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        55         9        19       73        C1         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3004        10         3        10       51

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        55         9        19       73        C2         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3004        10         3        10       51

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        55         9        19       73        C3         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3004        10         3        10       51

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        55         9        19       73        C4         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3004        10         3        10       51

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        55         9        19       73        D1         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3004        10         3        10       51

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        55         9        19       73        D2         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3004        10         3        10       51

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        55         9        19       73        D3         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3004        10         3        10       51

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        55         9        19       73        D4         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3004        10         3        10       51

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        56         9        27       73        A0         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3005        10         7         8       21

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        56         9        27       73        B1         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3005        10         7         8       21

      NREC        ID     MONTH       DAY     YEAR      SITE     NCHAN
        47        56         9        27       73        B2         1
    LENGTH        SR      HOUR    MINUTE      SEC
      3005        10         7         8       21
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	56	9	27	73	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3005	10	7	8	21		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	57	10	26	73	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	6	10	4		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	C4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

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47	62	1	30	74	D1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	D2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	D3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	62	1	30	74	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	5	7	34		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	63	1	25	74	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	7	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	63	1	25	74	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	7	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	63	1	25	74	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	7	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	63	1	25	74	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	7	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	63	1	25	74	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	7	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	63	1	25	74	C1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3001	10	4	7	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	63	1	25	74	C2	1
LENGTH	SR	HOUR	MINUTE	SEC		
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47	63	1	25	74	C3	1
LENGTH	SR	HOUR	MINUTE	SEC		
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LENGTH	SR	HOUR	MINUTE	SEC		
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36	64	7	8	74	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
2242	10	6	10	5		
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36	64	7	8	74	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
2242	10	6	10	5		
NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
36	64	7	8	74	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
2242	10	6	10	5		
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36	64	7	8	74	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
36	64	7	8	74	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	65	10	2	74	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	65	10	2	74	B1	1
LENGTH	SR	HOUR	MINUTE	SEC		
3004	10	1	8	30		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	65	10	2	74	B2	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	65	10	2	74	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	65	10	2	74	D4	1
LENGTH	SR	HOUR	MINUTE	SEC		
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38	66	12	12	70	A0	1
LENGTH	SR	HOUR	MINUTE	SEC		
2382	10	7	12	0		

NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	66	12	12	70	B3	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	66	12	12	70	B4	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
38	66	12	12	70	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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LENGTH	SR	HOUR	MINUTE	SEC		
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LENGTH	SR	HOUR	MINUTE	SEC		
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LENGTH	SR	HOUR	MINUTE	SEC		
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LENGTH	SR	HOUR	MINUTE	SEC		
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	67	6	25	70	E1	1
LENGTH	SR	HOUR	MINUTE	SEC		
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47	67	6	25	70	E3	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	67	6	25	70	E4	1
LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
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LENGTH	SR	HOUR	MINUTE	SEC		
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NREC	ID	MONTH	DAY	YEAR	SITE	NCHAN
47	67	6	25	70	F4	1
LENGTH	SR	HOUR	MINUTE	SEC		
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Headers for CDC Data

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   1  1142 BM 66   2 13 2439170 49.8 N   78.1 E 28 329  0.    0
   83.7    357.2  5 10 29.9   4 57 57.6  1142 BM     66/02/13
  2439170    49.8 N    078.1 E    6.3
                    0     83.7     357.2    05-10-29.9   04-57-57.
6    ULEDKCGIEX                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

   1  1142 F1 66   2 13 2439170 49.8 N   78.1 E 28 329  0.    0
   83.7    357.2  5 10 29.9   4 57 57.6  1142 F1     66/02/13
  2439170    49.8 N    078.1 E    6.3
                    0     83.7     357.2    05-10-29.9   04-57-57
.6    ULEDKCGIEX                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

   1  1142 F2 66   2 13 2439170 49.8 N   78.1 E 28 329  0.    0
   83.7    357.2  5 10 29.9   4 57 57.6  1142 F2     66/02/13
  2439170    49.8 N    078.1 E    6.3
                    0     83.7     357.2    05-10-29.9   04-57-57
.6    ULEDKCGIEX                                          28 ALMA
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   83.7    357.2  5 10 29.9   4 57 57.6  1142 F3     66/02/13
  2439170    49.8 N    078.1 E    6.3
                    0     83.7     357.2    05-10-29.9   04-57-57
.6    ULEDKCGIEX                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

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   83.7    357.2  5 10 29.9   4 57 57.6  1142 F4     66/02/13
  2439170    49.8 N    078.1 E    6.3
                    0     83.7     357.2    05-10-29.9   04-57-57
.6    ULEDKCGIEX                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

   2  2317 BM 66   3 20 2439205 49.7 N   78.0 E 28 329  0.    0
   83.8    357.3  6  2 30.4   5 49 57.4  2317 BM     66/03/20
  2439205    49.7 N    078.0 E    6.2
                    0     83.8     357.3    06-02-30.4   05-49-57
.4    XELGYIKTCK                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

   2  2317 F1 66   3 20 2439205 49.7 N   78.0 E 28 329  0.    0
   83.8    357.3  6  2 30.4   5 49 57.4  2317 F1     66/03/20
  2439205    49.7 N    078.0 E    6.2
                    0     83.8     357.3    06-02-30.4   05-49-57
.4    XELGYIKTCK                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

   2  2317 F2 66   3 20 2439205 49.7 N   78.0 E 28 329  0.    0
   83.8    357.3  6  2 30.4   5 49 57.4  2317 F2     66/03/20
  2439205    49.7 N    078.0 E    6.2
                    0     83.8     357.3    06-02-30.4   05-49-57
.4    XELGYIKTCK                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

   2  2317 F3 66   3 20 2439205 49.7 N   78.0 E 28 329  0.    0
   83.8    357.3  6  2 30.4   5 49 57.4  2317 F3     66/03/20
  2439205    49.7 N    078.0 E    6.2
                    0     83.8     357.3    06-02-30.4   05-49-57
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.4   XELGYIKICK                                             28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 2  2317 F4 66   3 20 2439205 49.7 N   78.0 E 28 329  0.   0
  83.8   357.3  6  2 30.4  5 49 57.4  2317 F4     66/03/20
 2439205   49.7 N   078.0 E   6.2
                    0     83.8    357.3   06-02-30.4   05-49-57
.4   XELGYIKICK                                             28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 3  1174 BM 66   8 19 2439357 49.8 N   78.1 E 28 329  0.   0
  83.7   357.2  4  5 30.6  3 52 58.3  1174 BM     66/08/19
 2439357   49.8 N   078.1 E   4.7
                    0     83.7    357.2   04-05-30.6   03-52-58
.3   KPVXPILKWU                                             28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 3  1174 F1 66   8 19 2439357 49.8 N   78.1 E 28 329  0.   0
  83.7   357.2  4  5 30.6  3 52 58.3  1174 F1     66/08/19
 2439357   49.8 N   078.1 E   4.7
                    0     83.7    357.2   04-05-30.6   03-52-58
.3   KPVXPILKWU                                             28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 3  1174 F2 66   8 19 2439357 49.8 N   78.1 E 28 329  0.   0
  83.7   357.2  4  5 30.6  3 52 58.3  1174 F2     66/08/19
 2439357   49.8 N   078.1 E   4.7
                    0     83.7    357.2   04-05-30.6   03-52-58
.3   KPVXPILKWU                                             28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 3  1174 F3 66   8 19 2439357 49.8 N   78.1 E 28 329  0.   0
  83.7   357.2  4  5 30.6  3 52 58.3  1174 F3     66/08/19
 2439357   49.8 N   078.1 E   4.7
                    0     83.7    357.2   04-05-30.6   03-52-58
.3   KPVXPILKWU                                             28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 3  1174 F4 66   8 19 2439357 49.8 N   78.1 E 28 329  0.   0
  83.7   357.2  4  5 30.6  3 52 58.3  1174 F4     66/08/19
 2439357   49.8 N   078.1 E   4.7
                    0     83.7    357.2   04-05-30.6   03-52-58
.3   KPVXPILKWU                                             28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 4  1156 BM 66  10 19 2439418 49.7 N   78.0 E 28 329  0.   0
  83.8   357.3  4 10 30.4  3 57 57.4  1156 BM     66/10/19
 2439418   49.7 N   078.0 E   5.6
                    0     83.8    357.3   04-10-30.4   03-57-57
.4   LYDXEKZHZK                                             28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 4  1156 F1 66  10 19 2439418 49.7 N   78.0 E 28 329  0.   0
  83.8   357.3  4 10 30.4  3 57 57.4  1156 F1     66/10/19
 2439418   49.7 N   078.0 E   5.6
                    0     83.8    357.3   04-10-30.4   03-57-57
.4   LYDXEKZHZK                                             28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 4  1156 F2 66  10 19 2439418 49.7 N   78.0 E 28 329  0.   0
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    83.8    357.3   4 10 30.4   3 57 57.4   1156 F2     66/10/19
  2439418    49.7 N    078.0 E    5.6
                      0     83.8     357.3    04-10-30.4    03-57-57
.4   LYDXEKZHZK                                              28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  4  1156 F3 66 10 19 2439418 49.7 N   78.0 E 28 329  0.   0
    83.8    357.3   4 10 30.4   3 57 57.4   1156 F3     66/10/19
  2439418    49.7 N    078.0 E    5.6
                      0     83.8     357.3    04-10-30.4    03-57-57
.4   LYDXEKZHZK                                              28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  4  1156 F4 66 10 19 2439418 49.7 N   78.0 E 28 329  0.   0
    83.8    357.3   4 10 30.4   3 57 57.4   1156 F4     66/10/19
  2439418    49.7 N    078.0 E    5.6
                      0     83.8     357.3    04-10-30.4    03-57-57
.4   LYDXEKZHZK                                              28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  5  1603 BM 66 10 27 2439426 73.4 N   54.6 E 40 648  0.   0
    59.4       6.3  6   8  4.7   5 57 57.8   1603 BM     66/10/27
  2439426    73.4 N    054.6 E    6.3
                      0     59.4       6.3    06-08-04.7    05-57-57
.8   DOUVLOUUDX                                              40 ARCT
IC ZONE                          648 NOVAYA ZEMLYA

  5  1603 F1 66 10 27 2439426 73.4 N   54.6 E 40 648  0.   0
    59.4       6.3  6   8  4.7   5 57 57.8   1603 F1     66/10/27
  2439426    73.4 N    054.6 E    6.3
                      0     59.4       6.3    06-08-04.7    05-57-57
.8   DOUVLOUUDX                                              40 ARCT
IC ZONE                          648 NOVAYA ZEMLYA

  5  1603 F2 66 10 27 2439426 73.4 N   54.6 E 40 648  0.   0
    59.4       6.3  6   8  4.7   5 57 57.8   1603 F2     66/10/27
  2439426    73.4 N    054.6 E    6.3
                      0     59.4       6.3    06-08-04.7    05-57-57
.8   DOUVLOUUDX                                              40 ARCT
IC ZONE                          648 NOVAYA ZEMLYA

  5  1603 F3 66 10 27 2439426 73.4 N   54.6 E 40 648  0.   0
    59.4       6.3  6   8  4.7   5 57 57.8   1603 F3     66/10/27
  2439426    73.4 N    054.6 E    6.3
                      0     59.4       6.3    06-08-04.7    05-57-57
.8   DOUVLOUUDX                                              40 ARCT
IC ZONE                          648 NOVAYA ZEMLYA

  5  1603 F4 66 10 27 2439426 73.4 N   54.6 E 40 648  0.   0
    59.4       6.3  6   8  4.7   5 57 57.8   1603 F4     66/10/27
  2439426    73.4 N    054.6 E    6.3
                      0     59.4       6.3    06-08-04.7    05-57-57
.8   DOUVLOUUDX                                              40 ARCT
IC ZONE                          648 NOVAYA ZEMLYA

  6  1691 BM 66 12  3 2439463 49.7 N   78.0 E 28 329 33.  33
    83.8    357.3   5 14 31.4   5  1 58.4   1691 BM     66/12/03
  2439463    49.7 N    078.0 E    4.9
                     33     83.8     357.3    05-14-31.4    05-01-58
.4   NHLRDFUFUX                                              28 ALMA
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-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  6  1691 F1 66 12  3 2439463 49.7 N  78.0 E 28 329 33.  33
   83.8   357.3  5 14 31.4  5  1 58.4  1691 F1    66/12/03
  2439463   49.7 N   078.0 E   4.9
                  33     83.8    357.3   05-14-31.4   05-01-58
.4   WHLBDFUEOX                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  6  1691 F2 66 12  3 2439463 49.7 N  78.0 E 28 329 33.  33
   83.8   357.3  5 14 31.4  5  1 58.4  1691 F2    66/12/03
  2439463   49.7 N   078.0 E   4.9
                  33     83.8    357.3   05-14-31.4   05-01-58
.4   WHLBDFUEOX                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  6  1691 F3 66 12  3 2439463 49.7 N  78.0 E 28 329 33.  33
   83.8   357.3  5 14 31.4  5  1 58.4  1691 F3    66/12/03
  2439463   49.7 N   078.0 E   4.9
                  33     83.8    357.3   05-14-31.4   05-01-58
.4   WHLBDFUEOX                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  6  1691 F4 66 12  3 2439463 49.7 N  78.0 E 28 329 33.  33
   83.8   357.3  5 14 31.4  5  1 58.4  1691 F4    66/12/03
  2439463   49.7 N   078.0 E   4.9
                  33     83.8    357.3   05-14-31.4   05-01-58
.4   WHLBDFUEOX                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  7  1591 BM 66 12 18 2439478 49.9 N  77.7 E 28 329  0.   0
   83.6   357.5  5 10 29.5  4 57 57.6  1591 BM    66/12/18
  2439478   49.9 N   077.7 E   5.9
                   0     83.6    357.5   05-10-29.5   04-57-57
.6   CLPDVRRHXZ                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  7  1591 F1 66 12 18 2439478 49.9 N  77.7 E 28 329  0.   0
   83.6   357.5  5 10 29.5  4 57 57.6  1591 F1    66/12/18
  2439478   49.9 N   077.7 E   5.9
                   0     83.6    357.5   05-10-29.5   04-57-57
.6   CLPDVRRHXZ                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  7  1591 F2 66 12 18 2439478 49.9 N  77.7 E 28 329  0.   0
   8[illegible]   357.5  5 10 29.5  4 57 57.6  1591 F2    66/12/18
  [illegible]4[illegible]8   49.9 N   077.7 E   5.9
                   0     83.6    357.5   05-10-29.5   04-57-57
[illegible]   CLPDVRRHXZ                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  7  1591 F3 66 12 18 2439478 49.9 N  77.7 E 28 329  0.   0
   83.6   357.5  5 10 29.5  4 57 57.6  1591 F3    66/12/18
  2439478   49.9 N   077.7 E   5.9
                   0     83.6    357.5  .05-10-29.5   04-57-57
.6   CLPDVRRHXZ                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  7  1591 F4 66 12 18 2439478 49.9 N  77.7 E 28 329  0.   0
   83.6   357.5  5 10 29.5  4 57 57.6  1591 F4    66/12/18
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  2439478    49.9 N    077.7 E    5.9
                   0       83.6     357.5    05-10-29.5    04-57-57
.6    CLPDVRRHXZ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  8  3153 BM 67  2 26 2439548 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 10 29.9  3 57 57.6  3153 BM     67/02/26
  2439548    49.8 N    078.1 E    6.0
                   0       83.7     357.2    04-10-29.9    03-57-57
.6    PEVKXRJLTJ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  8  3153 F1 67  2 26 2439548 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 10 29.9  3 57 57.6  3153 F1     67/02/26
  2439548    49.8 N    078.1 E    6.0
                   0       83.7     357.2    04-10-29.9    03-57-57
.6    PEVKXRJLTJ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  8  3153 F2 67  2 26 2439548 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 10 29.9  3 57 57.6  3153 F2     67/02/26
  2439548    49.8 N    078.1 E    6.0
                   0       83.7     357.2    04-10-29.9    03-57-57
.6    PEVKXRJLTJ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  8  3153 F3 67  2 26 2439548 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 10 29.9  3 57 57.6  3153 F3     67/02/26
  2439548    49.8 N    078.1 E    6.0
                   0       83.7     357.2    04-10-29.9    03-57-57
.6    PEVKXRJLTJ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  8  3153 F4 67  2 26 2439548 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 10 29.9  3 57 57.6  3153 F4     67/02/26
  2439548    49.8 N    078.1 E    6.0
                   0       83.7     357.2    04-10-29.9    03-57-57
.6    PEVKXRJLTJ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  9  3178 BM 67  3 25 2439575 49.8 N  78.1 E 28 329 33.  33
   83.7    357.2  6 10 32.2  5 57 59.9  3178 BM     67/03/25
  2439575    49.8 N    078.1 E    5.3
                  33       83.7     357.2    06-10-32.2    05-57-59
.9    LJZCEXDRHU                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  9  3178 F1 67  3 25 2439575 49.8 N  78.1 E 28 329 33.  33
   83.7    357.2  6 10 32.2  5 57 59.9  3178 F1     67/03/25
  2439575    49.8 N    078.1 E    5.3
                  33       83.7     357.2    06-10-32.2    05-57-59
.9    LJZCEXDRHU                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  9  3178 F2 67  3 25 2439575 49.8 N  78.1 E 28 329 33.  33
   83.7    357.2  6 10 32.2  5 57 59.9  3178 F2     67/03/25
  2439575    49.8 N    078.1 E    5.3
                  33       83.7     357.2    06-10-32.2    05-57-59
.9    LJZCEXDRHU                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR
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    9  3178 F3 67   3 25 2439575 49.8 N   78.1 E 28 329 33.  33
     83.7    357.2  6 10 32.2  5 57 59.9  3178 F3    67/03/25
    2439575    49.8 N    078.1 E    5.3
                      33     83.7     357.2   06-10-32.2   05-57-59
  .9   LJZCEXDRHU                                           28 ALMA
  -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

    9  3178 F4 67   3 25 2439575 49.8 N   78.1 E 28 329 33.  33
     83.7    357.2  6 10 32.2  5 57 59.9  3178 F4    67/03/25
    2439575    49.8 N    078.1 E    5.3
                      33     83.7     357.2   06-10-32.2   05-57-59
  .9   LJZCEXDRHU                                           28 ALMA
  -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

   10  1828 BM 67   4 20 2439601 49.7 N   78.1 E 28 329  0.   0
     83.8    357.2  4 20 30.3  4  7 57.3  1828 BM    67/04/20
    2439601    49.7 N    078.1 E    5.7
                       0     83.8     357.2   04-20-30.3   04-07-57
  .3   XOFBULGZCB                                           28 ALMA
  -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

   10  1828 F1 67   4 20 2439601 49.7 N   78.1 F 28 329  0.   0
     83.8    357.2  4 20 30.3  4  7 57.3  1828 F1    67/04/20
    2439601    49.7 N    078.1 E    5.7
                       0     83.8     357.2   04-20-30.3   04-07-57
  .3   XOFBULGZCB                                           28 ALMA
  -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

   10  1828 F2 67   4 20 2439601 49.7 N   78.1 E 28 329  0.   0
     83.8    357.2  4 20 30.3  4  7 57.3  1828 F2    67/04/20
    2439601    49.7 N    078.1 E    5.7
                       0     83.8     357.2   04-20-30.3   04-07-57
  .3   XOFBULGZCB                                           28 ALMA
  -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

   10  1828 F3 67   4 20 2439601 49.7 N   78.1 E 28 329  0.   0
     83.8    357.2  4 20 30.3  4  7 57.3  1828 F3    67/04/20
    2439601    49.7 N    078.1 E    5.7
                       0     83.8     357.2   04-20-30.3   04-07-57
  .3   XOFBULGZCB                                           28 ALMA
  -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

   10  1828 F4 67   4 20 2439601 49.7 N   78.1 E 28 329  0.   0
     83.8    357.2  4 20 30.3  4  7 57.3  1828 F4    67/04/20
    2439601    49.7 N    078.1 E    5.7
                       0     83.8     357.2   04-20-30.3   04-07-57
  .3   XOFBULGZCB                                           28 ALMA
  -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

   11  3257 BM 67   5 28 2439639 49.8 N   78.0 E 28 329 33.  33
     83.7    357.3  4 20 36.5  4  8  4.2  3257 BM    67/05/28
    2439639    49.8 N    078.0 E    5.9
                      33     83.7     357.3   04-20-36.5   04-08-04
  .2   HLWXEYSWZS                                           28 ALMA
  -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

   11  3257 F1 67   5 28 2439639 49.8 N   78.0 E 28 329 33.  33
     83.7    357.3  4 20 36.5  4  8  4.2  3257 F1    67/05/28
    2439639    49.8 N    078.0 E    5.9
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                    33     83.7     357.3   04-20-36.5   04-08-04
.2   HLWXEYSWZS                                            28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 11  3257 F2 67  5 28 2439639 49.8 N  78.0 E 28 329 33.  33
  83.7    357.3  4 20 36.5  4  8  4.2  3257 F2     67/05/28
 2439639   49.8 N   078.0 E   5.9
                    33     83.7     357.3   04-20-36.5   04-08-04
.2   HLWXEYSWZS                                            28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 11  3257 F3 67  5 28 2439639 49.8 N  78.0 E 28 329 33.  33
  83.7    357.3  4 20 36.5  4  8  4.2  3257 F3     67/05/28
 2439639   49.8 N   078.0 E   5.9
                    33     83.7     357.3   04-20-36.5   04-08-04
.2   HLWXEYSWZS                                            28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 11  3257 F4 67  5 28 2439639 49.8 N  78.0 E 28 329 33.  33
  83.7    357.3  4 20 36.5  4  8  4.2  3257 F4     67/05/28
 2439639   49.8 N   078.0 E   5.9
                    33     83.7     357.3   04-20-36.5   04-08-04
.2   HLWXEYSWZS                                            28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 12  3323 BM 67  6 29 2439671 49.7 N  78.0 E 28 329 33.  33
  83.8    357.3  3  9 21.8  2 56 48.8  3323 BM     67/06/29
 2439671   49.7 N   078.0 E   5.9
                    33     83.8     357.3   03-09-21.8   02-56-48
.8   KHLRGWRJXO                                            28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 12  3323 F1 67  6 29 2439671 49.7 N  78.0 E 28 329 33.  33
  83.8    357.3  3  9 21.8  2 56 48.8  3323 F1     67/06/29
 2439671   49.7 N   078.0 E   5.9
                    33     83.8     357.3   03-09-21.8   02-56-48
.8   KHLRGWRJXO                                            28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 12  3323 F2 67  6 29 2439671 49.7 N  78.0 E 28 329 33.  33
  83.8    357.3  3  9 21.8  2 56 48.8  3323 F2     67/06/29
 2439671   49.7 N   078.0 E   5.9
                    33     83.8     357.3   03-09-21.8   02-56-48
.8   KHLRGWRJXO                                            28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 12  3323 F3 67  6 29 2439671 49.7 N  78.0 E 28 329 33.  33
  83.8    357.3  3  9 21.8  2 56 48.8  3323 F3     67/06/29
 2439671   49.7 N   078.0 E   5.9
                    33     83.8     357.3   03-09-21.8   02-56-48
.8   KHLRGWRJXO                                            28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 12  3323 F4 67  6 29 2439671 49.7 N  78.0 E 28 329 33.  33
  83.8    357.3  3  9 21.8  2 56 48.8  3323 F4     67/06/29
 2439671   49.7 N   078.0 E   5.9
                    33     83.8     357.3   03-09-21.8   02-56-48
.8   KHLRGWRJXO                                            28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR
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 13  3496 BM 67   7 15 2439687 49.8 N   78.1 E 28 329  0.   0
   83.7   357.2   3 39 29.6  3 26 57.3  3496 BM     67/07/15
  2439687   49.8 N    078.1 E    5.4
                    0      83.7     357.2    03-39-29.6    03-26-57
.3    TBXBWHDLVF                                              28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 13  3496 F1 67   7 15 2439687 49.8 N   78.1 E 28 329  0.   0
   83.7   357.2   3 39 29.6  3 26 57.3  3496 F1     67/07/15
  2439687   49.8 N    078.1 E    5.4
                    0      83.7     357.2    03-39-29.6    03-26-57
.3    TBXBWHDLVF                                              28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 13  3496 F2 67   7 15 2439687 49.8 N   78.1 E 28 329  0.   0
   83.7   357.2   3 39 29.6  3 26 57.3  3496 F2     67/07/15
  2439687   49.8 N    078.1 E    5.4
                    0      83.7     357.2    03-39-29.6    03-26-57
.3    TBXBWHDLVF                                              28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 13  3496 F3 67   7 15 2439687 49.8 N   78.1 E 28 329  0.   0
   83.7   357.2   3 39 29.6  3 26 57.3  3496 F3     67/07/15
  2439687   49.8 N    078.1 E    5.4
                    0      83.7     357.2    03-39-29.6    03-26-57
.3    TBXBWHDLVF                                              28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 13  3496 F4 67   7 15 2439687 49.8 N   78.1 E 28 329  0.   0
   83.7   357.2   3 39 29.6  3 26 57.3  3496 F4     67/07/15
  2439687   49.8 N    078.1 E    5.4
                    0      83.7     357.2    03-39-29.6    03-26-57
.3    TBXBWHDLVF                                              28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 14  3576 BM 67   8  4 2439707 49.8 N   78.0 E 28 329 33.  33
   83.7   357.3   7 10 30.5  6 57 58.2  3576 BM     67/08/04
  2439707   49.8 N    078.0 E    5.3
                   33      83.7     357.3    07-10-30.5    06-57-58
.2    GVYTXJLKKO                                              28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 14  3576 F1 67   8  4 2439707 49.8 N   78.0 E 28 329 33.  33
   83.7   357.3   7 10 30.5  6 57 58.2  3576 F1     67/08/04
  2439707   49.8 N    078.0 E    5.3
                   33      83.7     357.3    07-10-30.5    06-57-58
.2    GVYTXJLKKO                                              28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 14  3576 F2 67   8  4 2439707 49.8 N   78.0 E 28 329 33.  33
   83.7   357.3   7 10 30.5  6 57 58.2  3576 F2     67/08/04
  2439707   49.8 N    078.0 E    5.3
                   33      83.7     357.3    07-10-30.5    06-57-58
.2    GVYTXJLKKO                                              28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 14  3576 F3 67   8  4 2439707 49.8 N   78.0 E 28 329 33.  33
   83.7   357.3   7 10 30.5  6 57 58.2  3576 F3     67/08/04
  2439707   49.8 N    078.0 E    5.3
                   33      83.7     357.3    07-10-30.5    06-57-58
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 .2   GVYTXJLKKO                                                28 ALMA
 -ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

  14  3576 F4 67   8  4 2439707 49.8 N  78.0 E 28 329 33.  33
    83.7    357.3   7 10 30.5  6 57 58.2  3576 F4     67/08/04
   2439707   49.8 N   078.0 E    5.3
                    33     83.7     357.3   07-10-30.5   06-57-58
 .2   GVYTXJLKKO                                                28 ALMA
 -ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

  15  1249 BM 67   9 16 2439750 50.0 N  77.7 E 28 329  0.   0
    83.5    357.5   4 16 29.2  4   3 57.9  1249 BM     67/09/16
   2439750   50.0 N   077.7 E    5.3
                     0     83.5     357.5   04-16-29.2   04-03-57
 .9   SPXBLKPVJB                                                28 ALMA
 -ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

  15  1249 F1 67   9 16 2439750 50.0 N  77.7 E 28 329  0.   0
    83.5    357.5   4 16 29.2  4   3 57.9  1249 F1     67/09/16
   2439750   50.0 N   077.7 E    5.3
                     0     83.5     357.5   04-16-29.2   04-03-57
 .9   SPXBLKPVJB                                                28 ALMA
 -ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

  15  1249 F2 67   9 16 2439750 50.0 N  77.7 E 28 329  0.   0
    83.5    357.5   4 16 29.2  4   3 57.9  1249 F2     67/09/16
   2439750   50.0 N   077.7 E    5.3
                     0     83.5     357.5   04-16-29.2   04-03-57
 .9   SPXBLKPVJB                                                28 ALMA
 -ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

  15  1249 F3 67   9 16 2439750 50.0 N  77.7 E 28 329  0.   0
    83.5    357.5   4 16 29.2  4   3 57.9  1249 F3     67/09/16
   2439750   50.0 N   077.7 E    5.3
                     0     83.5     357.5   04-16-29.2   04-03-57
 .9   SPXBLKPVJB                                                28 ALMA
 -ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

  15  1249 F4 67   9 16 2439750 50.0 N  77.7 E 28 329  0.   0
    83.5    357.5   4 16 29.2  4   3 57.9  1249 F4     67/09/16
   2439750   50.0 N   077.7 E    5.3
                     0     83.5     357.5   04-16-29.2   04-03-57
 .9   SPXBLKPVJB                                                28 ALMA
 -ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

  16  3808 BM 67   9 22 2439756 49.9 N  77.7 E 28 329  0.   0
    83.6    357.5   5 16 29.2  5   3 57.3  3808 BM     67/09/22
   2439756   49.9 N   077.7 E    5.3
                     0     83.6     357.5   05-16-29.2   05-03-57
 .3   OLIMPXZPWF                                                28 ALMA
 -ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

  [illegible] F1 67   9 22 2439756 49.9 N  77.7 E 28 329  0.   0
    [illegible]   357.5   5 16 29.2  5   3 57.3  3808 F1     67/09/22
   [illegible]   [illegible] N   077.7 E    5.3
                     0     83.6     357.5   05-16-29.2   05-03-57
      [illegible]                                               28 ALMA
      [illegible]                   329 EASTERN KAZAKH SSR

                          [illegible] N  77.7 E 28 329  0.   0
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  83.6    357.5  5 16 29.2  5   3 57.3  3808 F2     67/09/22
 2439756    49.9 N    077.7 E    5.3
                   0      83.6     357.5   05-16-29.2   05-03-57
.3   OLIMPXZPWF                                           28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 16  3808 F3 67  9 22 2439756 49.9 N  77.7 E 28 329  0.   0
  83.6    357.5  5 16 29.2  5   3 57.3  3808 F3     67/09/22
 2439756    49.9 N    077.7 E    5.3
                   0      83.6     357.5   05-16-29.2   05-03-57
.3   OLIMPXZPWF                                           28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 16  3808 F4 67  9 22 2439756 49.9 N  77.7 E 28 329  0.   0
  83.6    357.5  5 16 29.2  5   3 57.3  3808 F4     67/09/22
 2439756    49.9 N    077.7 E    5.3
                   0      83.6     357.5   05-16-29.2   05-03-57
.3   OLIMPXZPWF                                           28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 17  4100 BM 67 10  6 2439770 57.7 N  65.3 E 28 326 33.  33
  75.7      4.7  7 11 45.6  6 59 56.7  4100 BM     67/10/06
 2439770    57.7 N    065.3 E    4.7
                  33      75.7       4.7   07-11-45.6   06-59-56
.7   BYCLDZMFBX                                           28 ALMA
-ATA TO LAKE BAIKAL            326 CENTRAL RUSSIA

 17  4100 F1 67 10  6 2439770 57.7 N  65.3 E 28 326 33.  33
  75.7      4.7  7 11 45.6  6 59 56.7  4100 F1     67/10/06
 2439770    57.7 N    065.3 E    4.7
                  33      75.7       4.7   07-11-45.6   06-59-56
.7   BYCLDZMFBX                                           28 ALMA
-ATA TO LAKE BAIKAL            326 CENTRAL RUSSIA

 17  4100 F2 67 10  6 2439770 57.7 N  65.3 E 28 326 33.  33
  75.7      4.7  7 11 45.6  6 59 56.7  4100 F2     67/10/06
 2439770    57.7 N    065.3 E    4.7
                  33      75.7       4.7   07-11-45.6   06-59-56
.7   BYCLDZMFBX                                           28 ALMA
-ATA TO LAKE BAIKAL            326 CENTRAL RUSSIA

 17  4100 F3 67 10  6 2439770 57.7 N  65.3 E 28 326 33.  33
  75.7      4.7  7 11 45.6  6 59 56.7  4100 F3     67/10/06
 2439770    57.7 N    065.3 E    4.7
                  33      75.7       4.7   07-11-45.6   06-59-56
.7   BYCLDZMFBX                                           28 ALMA
-ATA TO LAKE BAIKAL            326 CENTRAL RUSSIA

 17  4100 F4 67 10  6 2439770 57.7 N  65.3 E 28 326 33.  33
  75.7      4.7  7 11 45.6  6 59 56.7  4100 F4     67/10/06
 2439770    57.7 N    065.3 E    4.7
                  33      75.7       4.7   07-11-45.6   06-59-56
.7   BYCLDZMFBX                                           28 ALMA
-ATA TO LAKE BAIKAL            326 CENTRAL RUSSIA

 18  4152 BM 67 10 17 2439781 49.8 N  78.0 E 28 329  0.   0
  83.7    357.3  5 16 30.2  5   3 57.9  4152 BM     67/10/17
 2439781    49.8 N    078.0 E    5.7
                   0      83.7     357.3   05-16-30.2   05-03-57
.9   QIRUFZLHXT                                           28 ALMA
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-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 18  4152 F1 67 10 17 2439781 49.8 N  78.0 E 28 329  0.   0
   83.7    357.3  5 16 30.2  5  3 57.9  4152 F1    67/10/17
  2439781    49.8 N    078.0 E    5.7
                     0     83.7     357.3   05-16-30.2   05-03-57
.9    RIRUEZLHXT                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 18  4152 F2 67 10 17 2439781 49.8 N  78.0 E 28 329  0.   0
   83.7    357.3  5 16 30.2  5  3 57.9  4152 F2    67/10/17
  2439781    49.8 N    078.0 E    5.7
                     0     83.7     357.3   05-16-30.2   05-03-57
.9    RIRUEZLHXT                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 18  4152 F3 67 10 17 2439781 49.8 N  78.0 E 28 329  0.   0
   83.7    357.3  5 16 30.2  5  3 57.9  4152 F3    67/10/17
  2439781    49.8 N    078.0 E    5.7
                     0     83.7     357.3   05-16-30.2   05-03-57
.9    RIRUEZLHXT                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 18  4152 F4 67 10 17 2439781 49.8 N  78.0 E 28 329  0.   0
   83.7    357.3  5 16 30.2  5  3 57.9  4152 F4    67/10/17
  2439781    49.8 N    078.0 E    5.7
                     0     83.7     357.3   05-16-30.2   05-03-57
.9    RIRUEZLHXT                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 19  4180 BM 67 10 21 2439785 73.4 N  54.8 E 40 648  0.   0
   59.4       6.2  5 10  4.8  4 59 57.8  4180 BM    67/10/21
  2439785    73.4 N    054.8 E    5.9
                     0     59.4       6.2   05-10-04.8   04-59-57
.8    AWGLXJMFYP                                          40 ARCT
IC ZONE                        648 NOVAYA ZEMLYA

 19  4180 F1 67 10 21 2439785 73.4 N  54.8 E 40 648  0.   0
   59.4       6.2  5 10  4.8  4 59 57.8  4180 F1    67/10/21
  2439785    73.4 N    054.8 E    5.9
                     0     59.4       6.2   05-10-04.8   04-59-57
.8    AWGLXJMFYP                                          40 ARCT
IC ZONE                        648 NOVAYA ZEMLYA

 19  4180 F2 67 10 21 2439785 73.4 N  54.8 E 40 648  0.   0
   59.4       6.2  5 10  4.8  4 59 57.8  4180 F2    67/10/21
  2439785    73.4 N    054.8 E    5.9
                     0     59.4       6.2   05-10-04.8   04-59-57
.8    AWGLXJMFYP                                          40 ARCT
IC ZONE                        648 NOVAYA ZEMLYA

 19  4180 F3 67 10 21 2439785 73.4 N  54.8 E 40 648  0.   0
   59.4       6.2  5 10  4.8  4 59 57.8  4180 F3    67/10/21
  2439785    73.4 N    054.8 E    5.9
                     0     59.4       6.2   05-10-04.8   04-59-57
.8    AWGLXJMFYP                                          40 ARCT
IC ZONE                        648 NOVAYA ZEMLYA

 19  4180 F4 67 10 21 2439785 73.4 N  54.8 E 40 648  0.   0
   59.4       6.2  5 10  4.8  4 59 57.8  4180 F4    67/10/21
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  2439785    73.4 N    054.8 E    5.9
                  0      59.4      6.2   05-10-04.8    04-59-57
.8    WWGLXJMEYP                                        40 ARCT
IC ZONE                            648 NOVAYA ZEMLYA

 20  4578 BM 67 10 30 2439794 49.8 N   78.0 E 28 329  0.   0
   83.7    357.3   6 16 30.1  6   3 57.8  4578 BM    67/10/30
  2439794    49.8 N    078.0 E    5.5
                  0      83.7     357.3   06-16-30.1   06-03-57
.8    OZRKLSJTXB                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 20  4578 F1 67 10 30 2439794 49.8 N   78.0 E 28 329  0.   0
   83.7    357.3   6 16 30.1  6   3 57.8  4578 F1    67/10/30
  2439794    49.8 N    078.0 E    5.5
                  0      83.7     357.3   06-16-30.1   06-03-57
.8    OZRKLSJTXB                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 20  4578 F2 67 10 30 2439794 49.8 N   78.0 E 28 329  0.   0
   83.7    357.3   6 16 30.1  6   3 57.8  4578 F2    67/10/30
  2439794    49.8 N    078.0 E    5.5
                  0      83.7     357.3   06-16-30.1   06-03-57
.8    OZRKLSJTXB                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 20  4578 F3 67 10 30 2439794 49.8 N   78.0 E 28 329  0.   0
   83.7    357.3   6 16 30.1  6   3 57.8  4578 F3    67/10/30
  2439794    49.8 N    078.0 E    5.5
                  0      83.7     357.3   06-16-30.1   06-03-57
.8    OZRKLSJTXB                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 20  4578 F4 67 10 30 2439794 49.8 N   78.0 E 28 329  0.   0
   83.7    357.3   6 16 30.1  6   3 57.8  4578 F4    67/10/30
  2439794    49.8 N    078.0 E    5.5
                  0      83.7     357.3   06-16-30.1   06-03-57
.8    OZRKLSJTXB                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 21  2135 BM 67 11 22 2439817 50.0 N   77.7 E 28 329  0.   0
   83.5    357.5   4 16 28.9  4   3 57.6  2135 BM    67/11/22
  2439817    50.0 N    077.7 E    4.8
                  0      83.5     357.5   04-16-28.9   04-03-57
.6    BLHZIBDSVX                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 21  2135 F1 67 11 22 2439817 50.0 N   77.7 E 28 329  0.   0
   83.5    357.5   4 16 28.9  4   3 57.6  2135 F1    67/11/22
  2439817    50.0 N    077.7 E    4.8
                  0      83.5     357.5   04-16-28.9   04-03-57
.6    BLHZIBDSVX                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 21  2135 F2 67 11 22 2439817 50.0 N   77.7 E 28 329  0.   0
   83.5    357.5   4 16 28.9  4   3 57.6  2135 F2    67/11/22
  2439817    50.0 N    077.7 E    4.8
                  0      83.5     357.5   04-16-28.9   04-03-57
.6    BLHZIBDSVX                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR
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 21  2135 F3 67 11 22 2439817 50.0 N   77.7 E 28 329  0.   0
   83.5   357.5  4 16 28.9  4  3 57.6  2135 F3    67/11/22
  2439817   50.0 N   077.7 E   4.8
                     0     83.5    357.5   04-16-28.9   04-03-57
.6   BLHZIBDSVX                                          28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 21  2135 F4 67 11 22 2439817 50.0 N   77.7 E 28 329  0.   0
   83.5   357.5  4 16 28.9  4  3 57.6  2135 F4    67/11/22
  2439817   50.0 N   077.7 E   4.8
                     0     83.5    357.5   04-16-28.9   04-03-57
.6   BLHZIBDSVX                                          28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 22  2837 BM 67 12  8 2439833 49.8 N   78.2 E 28 329  0.   0
   83.7   357.1  6 16 29.3  6  3 57.0  2837 BM    67/12/08
  2439833   49.8 N   078.2 E   5.4
                     0     83.7    357.1   06-16-29.3   06-03-57
.0   EZXGVYPWLM                                          28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 22  2837 F1 67 12  8 2439833 49.8 N   78.2 E 28 329  0.   0
   83.7   357.1  6 16 29.3  6  3 57.0  2837 F1    67/12/08
  2439833   49.8 N   078.2 E   5.4
                     0     83.7    357.1   06-16-29.3   06-03-57
.0   EZXGVYPWLM                                          28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 22  2837 F2 67 12  8 2439833 49.8 N   78.2 E 28 329  0.   0
   83.7   357.1  6 16 29.3  6  3 57.0  2837 F2    67/12/08
  2439833   49.8 N   078.2 E   5.4
                     0     83.7    357.1   06-16-29.3   06-03-57
.0   EZXGVYPWLM                                          28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 22  2837 F3 67 12  8 2439833 49.8 N   78.2 E 28 329  0.   0
   83.7   357.1  6 16 29.3  6  3 57.0  2837 F3    67/12/08
  2439833   49.8 N   078.2 E   5.4
                     0     83.7    357.1   06-16-29.3   06-03-57
.0   EZXGVYPWLM                                          28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 22  2837 F4 67 12  8 2439833 49.8 N   78.2 E 28 329  0.   0
   83.7   357.1  6 16 29.3  6  3 57.0  2837 F4    67/12/08
  2439833   49.8 N   078.2 E   5.4
                     0     83.7    357.1   06-16-29.3   06-03-57
.0   EZXGVYPWLM                                          28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 23  5038 BM 68  1  7 2439863 49.8 N   78.0 E 28 329  0.   0
   83.7   357.3  3 59 29.9  3 46 57.6  5038 BM    68/01/07
  2439863   49.8 N   078.0 E   5.3
                     0     83.7    357.3   03-59-29.9   03-46-57
.6   WLSCYWCXGJ                                          28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 23  5038 F1 68  1  7 2439863 49.8 N   78.0 E 28 329  0.   0
   83.7   357.3  3 59 29.9  3 46 57.6  5038 F1    68/01/07
  2439863   49.8 N   078.0 E   5.3
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                    0      83.7     357.3    03-59-29.9    03-46-57
.6   WLSCYWCXGJ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 23  5038 F2 68  1  7 2439863 49.8 N  78.0 E 28 329  0.   0
   83.7    357.3  3 59 29.9  3 46 57.6  5038 F2    68/01/07
  2439863   49.8 N   078.0 E   5.3
                    0      83.7     357.3    03-59-29.9    03-46-57
.6   WLSCYWCXGJ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 23  5038 F3 68  1  7 2439863 49.8 N  78.0 E 28 329  0.   0
   83.7    357.3  3 59 29.9  3 46 57.6  5038 F3    68/01/07
  2439863   49.8 N   078.0 E   5.3
                    0      83.7     357.3    03-59-29.9    03-46-57
.6   WLSCYWCXGJ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 23  5038 F4 68  1  7 2439863 49.8 N  78.0 E 28 329  0.   0
   83.7    357.3  3 59 29.9  3 46 57.6  5038 F4    68/01/07
  2439863   49.8 N   078.0 E   5.3
                    0      83.7     357.3    03-59-29.9    03-46-57
.6   WLSCYWCXGJ                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 24  5907 BM 68  4 24 2439971 49.8 N  78.1 E 28 329 51.  51
   83.7    357.2 10 35 42.7 10 23 10.4  5907 BM    68/04/24
  2439971   49.8 N   078.1 E   4.1
                   51      83.7     357.2    10-35-42.7    10-23-10
.4   BVXFYBUYLT                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 24  5907 F1 68  4 24 2439971 49.8 N  78.1 E 28 329 51.  51
   83.7    357.2 10 35 42.7 10 23 10.4  5907 F1    68/04/24
  2439971   49.8 N   078.1 E   4.1
                   51      83.7     357.2    10-35-42.7    10-23-10
.4   BVXFYBUYLT                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 24  5907 F2 68  4 24 2439971 49.8 N  78.1 E 28 329 51.  51
   83.7    357.2 10 35 42.7 10 23 10.4  5907 F2    68/04/24
  2439971   49.8 N   078.1 E   4.1
                   51      83.7     357.2    10-35-42.7    10-23-10
.4   BVXFYBUYLT                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 24  5907 F3 68  4 24 2439971 49.8 N  78.1 E 28 329 51.  51
   83.7    357.2 10 35 42.7 10 23 10.4  5907 F3    68/04/24
  2439971   49.8 N   078.1 E   4.1
                   51      83.7     357.2    10-35-42.7    10-23-10
.4   BVXFYBUYLT                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 24  5907 F4 68  4 24 2439971 49.8 N  78.1 E 28 329 51.  51
   83.7    357.2 10 35 42.7 10 23 10.4  5907 F4    68/04/24
  2439971   49.8 N   078.1 E   4.1
                   51      83.7     357.2    10-35-42.7    10-23-10
.4   BVXFYBUYLT                                            28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR
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 25  6150 BM 68  5 21 2439998 38.8 N  65.1 E 48 714 33.  33
   94.4       6.8  3 11 39.4  2 58 16.2  6150 BM     68/05/21
  2439998   38.8 N   065.1 E    4.3
                   33     94.4       6.8   03-11-39.4   02-58-16
.2   YPDTQLOUDW                                          48 HIND
U KUSH AND PAMIR                  714 SOUTHEASTERN UZBEK SSR

 25  6150 F1 68  5 21 2439998 38.8 N  65.1 E 48 714 33.  33
   94.4       6.8  3 11 39.4  2 58 16.2  6150 F1     68/05/21
  2439998   38.8 N   065.1 E    4.3
                   33     94.4       6.8   03-11-39.4   02-58-16
.2   YPDTQLOUDW                                          48 HIND
U KUSH AND PAMIR                  714 SOUTHEASTERN UZBEK SSR

 25  6150 F2 68  5 21 2439998 38.8 N  65.1 E 48 714 33.  33
   94.4       6.8  3 11 39.4  2 58 16.2  6150 F2     68/05/21
  2439998   38.8 N   065.1 E    4.3
                   33     94.4       6.8   03-11-39.4   02-58-16
.2   YPDTQLOUDW                                          48 HIND
U KUSH AND PAMIR                  714 SOUTHEASTERN UZBEK SSR

 25  6150 F3 68  5 21 2439998 38.8 N  65.1 E 48 714 33.  33
   94.4       6.8  3 11 39.4  2 58 16.2  6150 F3     68/05/21
  2439998   38.8 N   065.1 E    4.3
                   33     94.4       6.8   03-11-39.4   02-58-16
.2   YPDTQLOUDW                                          48 HIND
U KUSH AND PAMIR                  714 SOUTHEASTERN UZBEK SSR

 25  6150 F4 68  5 21 2439998 38.8 N  65.1 E 48 714 33.  33
   94.4       6.8  3 11 39.4  2 58 16.2  6150 F4     68/05/21
  2439998   38.8 N   065.1 E    4.3
                   33     94.4       6.8   03-11-39.4   02-58-16
.2   YPDTQLOUDW                                          48 HIND
U KUSH AND PAMIR                  714 SOUTHEASTERN UZBEK SSR


 26  8162 BM 68  6 11 2440019 49.8 N  78.1 E 28 329  0.   0
  83.7    357.2  3 18 30.0  3  5 57.7  8162 BM     68/06/11
 2440019   49.8 N   078.1 E    5.3
                  0     83.7      357.2   03-18-30.0   03-05-57.
7   VVRXRBPOLZ                                         28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 26  8162 F1 68  6 11 2440019 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  3 18 30.0  3  5 57.7  8162 F1     68/06/11
  2440019   49.8 N   078.1 E    5.3
                   0     83.7     357.2   03-18-30.0   03-05-57
.7   VVRXRBPOLZ                                          28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 26  8162 F2 68  6 11 2440019 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  3 18 30.0  3  5 57.7  8162 F2     68/06/11
  2440019   49.8 N   078.1 E    5.3
                   0     83.7     357.2   03-18-30.0   03-05-57
.7   VVRXRBPOLZ                                          28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 26  8162 F3 68  6 11 2440019 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  3 18 30.0  3  5 57.7  8162 F3     68/06/11
  2440019   49.8 N   078.1 E    5.3
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                 0     83.7    357.2   03-18-30.0   03-05-57
.7   VVRXRBPOLZ                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 26  8162 F4 68  6 11 2440019 49.8 N  78.1 E 28 329  0.   0
   83.7   357.2  3 18 30.0  3  5 57.7  8162 F4    68/06/11
  2440019   49.8 N   078.1 E   5.3
                 0     83.7    357.2   03-18-30.0   03-05-57
.7   VVRXRBPOLZ                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 27  8191 BM 68  6 19 2440027 50.0 N  79.1 E 28 329  0.   0
   83.5   356.6  5 18 28.3  5  5 57.3  8191 BM    68/06/19
  2440027   50.0 N   079.1 E   5.5
                 0     83.5    356.6   05-18-28.3   05-05-57
.3   CJXLVOEJIR                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 27  8191 F1 68  6 19 2440027 50.0 N  79.1 E 28 329  0.   0
   83.5   356.6  5 18 28.3  5  5 57.3  8191 F1    68/06/19
  2440027   50.0 N   079.1 E   5.5
                 0     83.5    356.6   05-18-28.3   05-05-57
.3   CJXLVOEJIR                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 27  8191 F2 68  6 19 2440027 50.0 N  79.1 E 28 329  0.   0
   83.5   356.6  5 18 28.3  5  5 57.3  8191 F2    68/06/19
  2440027   50.0 N   079.1 E   5.5
                 0     83.5    356.6   05-18-28.3   05-05-57
.3   CJXLVOEJIR                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 27  8191 F3 68  6 19 2440027 50.0 N  79.1 E 28 329  0.   0
   83.5   356.6  5 18 28.3  5  5 57.3  8191 F3    68/06/19
  2440027   50.0 N   079.1 E   5.5
               . 0     83.5    356.6   05-18-28.3   05-05-57
.3   CJXLVOEJIR                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 27  8191 F4 68  6 19 2440027 50.0 N  79.1 E 28 329  0.   0
   83.5   356.6  5 18 28.3  5  5 57.3  8191 F4    68/06/19
  2440027   50.0 N   079.1 E   5.5
                 0     83.5    356.6   05-18-28.3   05-05-57
.3   CJXLVOEJIR                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 28  6166 BM 68  7  1 2440039 47.9 N  47.8 E 30 357 33.  33
   83.0    17.2  4 14 25.3  4  1 57.2  6166 BM    68/07/01
  2440039   47.9 N   047.8 E   5.5
                33     83.0     17.2   04-14-25.3   04-01-57
.2   KFYLTHXCHC                                       30 MIDO
LE EAST - CRIMEA - BALKANS    357 SOUTHWESTERN RUSSIA

 28  6166 F1 68  7  1 2440039 47.9 N  47.8 E 30 357 33.  33
   83.0    17.2  4 14 25.3  4  1 57.2  6166 F1    68/07/01
  2440039   47.9 N   047.8 E   5.5
    .           33     83.0     17.2   04-14-25.3   04-01-57
.2   KFYLTHXCHC                                       30 MIDO
LE EAST - CRIMEA - BALKANS    357 SOUTHWESTERN RUSSIA
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 28  6166 F2 68   7  1 2440039 47.9 N   47.8 E 30 357 33.  33
   83.0     17.2  4 14 25.3  4   1 57.2  6166 F2     68/07/01
  2440039    47.9 N    047.8 E    5.5
                 33     83.0      17.2   04-14-25.3    04-01-57
.2    KFYLTHXCBC                                        30 MIDD
LE EAST - CRIMEA - BALKANS   357 SOUTHWESTERN RUSSIA

 28  6166 F3 68   7  1 2440039 47.9 N   47.8 E 30 357 33.  33
   83.0     17.2  4 14 25.3  4   1 57.2  6166 F3     68/07/01
  2440039    47.9 N    047.8 E    5.5
                 33     83.0      17.2   04-14-25.3    04-01-57
.2    KFYLTHXCBC                                        30 MIDD
LE EAST - CRIMEA - BALKANS   357 SOUTHWESTERN RUSSIA

 28  6166 F4 68   7  1 2440039 47.9 N   47.8 E 30 357 33.  33
   83.0     17.2  4 14 25.3  4   1 57.2  6166 F4     68/07/01
  2440039    47.9 N    047.8 E    5.5
                 33     83.0      17.2   04-14-25.3    04-01-57
.2    KFYLTHXCBC                                        30 MIDD
LE EAST - CRIMEA - BALKANS   357 SOUTHWESTERN RUSSIA

 29  6347 BM 68   7 12 2440050 49.8 N   78.1 E 28 329  0.   0
   83.7    357.2 12 20 29.9 12   7 57.6  6347 BM     68/07/12
  2440050    49.8 N    078.1 E    5.4
                  0     83.7     357.2   12-20-29.9    12-07-57
.6    EXMPJRPLCP                                        28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 29  6347 F1 68   7 12 2440050 49.8 N   78.1 E 28 329  0.   0
   83.7    357.2 12 20 29.9 12   7 57.6  6347 F1     68/07/12
  2440050    49.8 N    078.1 E    5.4
                  0     83.7     357.2   12-20-29.9    12-07-57
.6    EXMPJRPLCP                                        28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 29  6347 F2 68   7 12 2440050 49.8 N   78.1 E 28 329  0.   0
   83.7    357.2 12 20 29.9 12   7 57.6  6347 F2     68/07/12
  2440050    49.8 N    078.1 E    5.4
                  0     83.7     357.2   12-20-29.9    12-07-57
.6    EXMPJRPLCP                                        28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 29  6347 F3 68   7 12 2440050 49.8 N   78.1 E 28 329  0.   0
   83.7    357.2 12 20 29.9 12   7 57.6  6347 F3     68/07/12
  2440050    49.8 N    078.1 E    5.4
                  0     83.7     357.2   12-20-29.9    12-07-57
.6    EXMPJRPLCP                                        28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 29  6347 F4 68   7 12 2440050 49.8 N   78.1 E 28 329  0.   0
   83.7    357.2 12 20 29.9 12   7 57.6  6347 F4     68/07/12
  2440050    49.8 N    078.1 E    5.4
                  0     83.7     357.2   12-20-29.9    12-07-57
.6    EXMPJRPLCP                                        28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 30  6543 BM 68   8 20 2440089 50.0 N   78.0 E 28 329  0.   0
   83.5    357.3  3 45  0.0  3  32 28.8  6543 BM     68/08/20
  2440089    50.0 N    078.0 E    0.0
                  0     83.5     357.3   03-45-00.0    03-32-28
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.8    TIPPJGLXWF                                                28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 30  6543 F1 68   8 20 2440089 50.0 N   78.0 E 28 329  0.   0
   83.5    357.3   3 45  0.0   3 32 28.8  6543 F1     68/08/20
  2440089    50.0 N    078.0 E    0.0
                     0     83.5     357.3    03-45-00.0    03-32-28
.8    TIPPJGLXWF                                                28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 30  6543 F2 68   8 20 2440089 50.0 N   78.0 E 28 329  0.   0
   83.5    357.3   3 45  0.0   3 32 28.8  6543 F2     68/08/20
  2440089    50.0 N    078.0 E    0.0
                     0     83.5     357.3    03-45-00.0    03-32-28
.8    TIPPJGLXWF                                                28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 30  6543 F3 68   8 20 2440089 50.0 N   78.0 E 28 329  0.   0
   83.5    357.3   3 45  0.0   3 32 28.8  6543 F3     68/08/20
  2440089    50.0 N    078.0 E    0.0
                     0     83.5     357.3    03-45-00.0    03-32-28
.8    TIPPJGLXWF                                                28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 30  6543 F4 68   8 20 2440089 50.0 N   78.0 E 28 329  0.   0
   83.5    357.3   3 45  0.0   3 32 28.8  6543 F4     68/08/20
  2440089    50.0 N    078.0 E    0.0
                     0     83.5     357.3    03-45-00.0    03-32-28
.8    TIPPJGLXWF                                                28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 31  7165 BM 68   9 29 2440129 49.8 N   78.1 E 28 329 33.  33
   83.7    357.2   3 55 26.9   3 42 54.6  7165 BM     68/09/29
  2440129    49.8 N    078.1 E    6.1
                    33     83.7     357.2    03-55-26.9    03-42-54
.6    JGPDROTCXL                                                28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 31  7165 F1 68   9 29 2440129 49.8 N   78.1 E 28 329 33.  33
   83.7    357.2   3 55 26.9   3 42 54.6  7165 F1     68/09/29
  2440129    49.8 N    078.1 E    6.1
                    33     83.7     357.2    03-55-26.9    03-42-54
.6    JGPDROTCXL                                                28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 31  7165 F2 68   9 29 2440129 49.8 N   78.1 E 28 329 33.  33
   83.7    357.2   3 55 26.9   3 42 54.6  7165 F2     68/09/29
  2440129    49.8 N    078.1 E    6.1
                    33     83.7     357.2    03-55-26.9    03-42-54
.6    JGPDROTCXL                                                28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 31  7165 F3 68   9 29 2440129 49.8 N   78.1 E 28 329 33.  33
   83.7    357.2   3 55 26.9   3 42 54.6  7165 F3     68/09/29
  2440129    49.8 N    078.1 E    6.1
                    33     83.7     357.2    03-55-26.9    03-42-54
.6    JGPDROTCXL                                                28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 31  7165 F4 68   9 29 2440129 49.8 N   78.1 E 28 329 33.  33
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     83.7    357.2  3 55 26.9  3 42 54.6  7165 F4     68/09/29
   2440129    49.8 N    078.1 E    6.1
                     33     83.7     357.2   03-55-26.9   03-42-54
 .6   JGPDRDICXL                                           28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  32  7292 BM 68 11  7 2440168 73.4 N  54.9 E 40 648  0.   0
    59.4     6.2 10 12 12.1 10  2  5.1  7292 BM     68/11/07
   2440168   73.4 N   054.9 E    6.0
                      0     59.4       6.2   10-12-12.1   10-02-05
 .1   BMXFGLTRTD                                           40 ARCT
 IC ZONE                          648 NOVAYA ZEMLYA

  32  7292 F1 68 11  7 2440168 73.4 N  54.9 E 40 648  0.   0
    59.4     6.2 10 12 12.1 10  2  5.1  7292 F1     68/11/07
   2440168   73.4 N   054.9 E    6.0
                      0     59.4       6.2   10-12-12.1   10-02-05
 .1   BMXEGLTPTD                                           40 ARCT
 IC ZONE                          648 NOVAYA ZEMLYA

  32  7292 F2 68 11  7 2440168 73.4 N  54.9 E 40 648  0.   0
    59.4     6.2 10 12 12.1 10  2  5.1  7292 F2     68/11/07
   2440168   73.4 N   054.9 E    6.0
                      0     59.4       6.2   10-12-12.1   10-02-05
 .1   BMXEGLTRTD                                           40 ARCT
 IC ZONE                          648 NOVAYA ZEMLYA

  32  7292 F3 68 11  7 2440168 73.4 N  54.9 E 40 648  0.   0
    59.4     6.2 10 12 12.1 10  2  5.1  7292 F3     68/11/07
   2440168   73.4 N   054.9 E    6.0
                      0     59.4       6.2   10-12-12.1   10-02-05
 .1   BMXEGLTRTD                                           40 ARCT
 IC ZONE                          648 NOVAYA ZEMLYA

  32  7292 F4 68 11  7 2440168 73.4 N  54.9 E 40 648  0.   0
    59.4     6.2 10 12 12.1 10  2  5.1  7292 F4     68/11/07
   2440168   73.4 N   054.9 E    6.0
                      0     59.4       6.2   10-12-12.1   10-02-05
 .1   BMXFGLTPTD                                           40 ARCT
 IC ZONE                          648 NOVAYA ZEMLYA

  33  7358 BM 68 11  9 2440170 49.8 N  78.0 E 28 329  0.   0
    83.7    357.3  3  6 29.9  2 53 57.6  7358 BM     68/11/09
   2440170    49.8 N   078.0 E    4.9
                      0     83.7     357.3   03-06-29.9   02-53-57
 .6   ILTHZJOXIG                                           28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  33  7358 F1 68 11  9 2440170 49.8 N  78.0 E 28 329  0.   0
    83.7    357.3  3  6 29.9  2 53 57.6  7358 F1     68/11/09
   2440170    49.8 N   078.0 E    4.9
                      0     83.7     357.3   03-06-29.9   02-53-57
 .6   ILTHZJOXIG                                           28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  33  7358 F2 68 11  9 2440170 49.8 N  78.0 E 28 329  0.   0
    83.7    357.3  3  6 29.9  2 53 57.6  7358 F2     68/11/09
   2440170    49.8 N   078.0 E    4.9
                      0     83.7     357.3   03-06-29.9   02-53-57
 .6   ILTHZJOXIG                                           28 ALMA
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-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 33  7358 F3 68 11  9 2440170 49.8 N  78.0 E 28 329  0.   0
   83.7    357.3  3  6 29.9  2 53 57.6  7358 F3    68/11/09
  2440170   49.8 N   078.0 E   4.9
                  0     83.7     357.3   03-06-29.9   02-53-57
.6   ILTHZJOXIG                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 33  7358 F4 68 11  9 2440170 49.8 N  78.0 E 28 329  0.   0
   83.7    357.3  3  6 29.9  2 53 57.6  7358 F4    68/11/09
  2440170   49.8 N   078.0 E   4.9
                  0     83.7     357.3   03-06-29.9   02-53-57
.6   ILTHZJOXIG                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 34  7489 BM 68 12 18 2440209 49.7 N  78.1 E 28 329  0.   0
   83.8    357.2  5 14 29.7  5  1 56.7  7489 BM    68/12/18
  2440209   49.7 N   078.1 E   5.2
                  0     83.8     357.2   05-14-29.7   05-01-56
.7   HMLTXIERID                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 34  7489 F1 68 12 18 2440209 49.7 N  78.1 E 28 329  0.   0
   83.8    357.2  5 14 29.7  5  1 56.7  7489 F1    68/12/18
  2440209   49.7 N   078.1 E   5.2
                  0     83.8     357.2   05-14-29.7   05-01-56
.7   HMLTXIERID                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 34  7489 F2 68 12 18 2440209 49.7 N  78.1 E 28 329  0.   0
   83.8    357.2  5 14 29.7  5  1 56.7  7489 F2    68/12/18
  2440209   49.7 N   078.1 E   5.2
                  0     83.8     357.2   05-14-29.7   05-01-56
.7   HMLTXIERID                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 34  7489 F3 68 12 18 2440209 49.7 N  78.1 E 28 329  0.   0
   83.8    357.2  5 14 29.7  5  1 56.7  7489 F3    68/12/18
  2440209   49.7 N   078.1 E   5.2
                  0     83.8     357.2   05-14-29.7   05-01-56
.7   HMLTXIERID                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 34  7489 F4 68 12 18 2440209 49.7 N  78.1 E 28 329  0.   0
   83.8    357.2  5 14 29.7  5  1 56.7  7489 F4    68/12/18
  2440209   49.7 N   078.1 E   5.2
                  0     83.8     357.2   05-14-29.7   05-01-56
.7   HMLTXIERID                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 35  7558 BM 69  3  7 2440288 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  8 39 29.7  8 26 57.4  7558 BM    69/03/07
  2440288   49.8 N   078.1 E   5.5
                  0     83.7     357.2   08-39-29.7   08-26-57
.4   YKUSSMLXCM                                       28 ALMA
-ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 35  7558 F1 69  3  7 2440288 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  8 39 29.7  8 26 57.4  7558 F1    69/03/07
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  2440288    49.8 N    078.1 E    5.5
                     0     83.7     357.2    08-39-29.7    08-26-57
 .4    YKUSSMLXCM                                            28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 35  7558 F2 69   3  7 2440288 49.8 N   78.1 E 28 329   0.    0
   83.7    357.2   8 39 29.7  8 26 57.4  7558 F2      69/03/07
  2440288    49.8 N    078.1 E    5.5
                     0     83.7     357.2    08-39-29.7    08-26-57
 .4    YKUSSMLXCM                                            28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 35  7558 F3 69   3  7 2440288 49.8 N   78.1 E 28 329   0.    0
   83.7    357.2   8 39 29.7  8 26 57.4  7558 F3      69/03/07
  2440288    49.8 N    078.1 E    5.5
                     0     83.7     357.2    08-39-29.7    08-26-57
 .4    YKUSSMLXCM                                            28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 35  7558 F4 69   3  7 2440288 49.8 N   78.1 E 28 329   0.    0
   83.7    357.2   8 39 29.7  8 26 57.4  7558 F4      69/03/07
  2440288    49.8 N    078.1 E    5.5
                     0     83.7     357.2    08-39-29.7    08-26-57
 .4    YKUSSMLXCM                                            28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 36  1390 BM 69   5 16 2440358 49.8 N   78.1 E 28 329   0.    0
   83.7    357.2   4 15 29.3  4  2 57.0  1390 BM      69/05/16
  2440358    49.8 N    078.1 E    5.3
                     0     83.7     357.2    04-15-29.3    04-02-57
 .0    LJWTTTRXDD                                            28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 36  1390 F1 69   5 16 2440358 49.8 N   78.1 E 28 329   0.    0
   83.7    357.2   4 15 29.3  4  2 57.0  1390 F1      69/05/16
  2440358    49.8 N    078.1 E    5.3
                     0     83.7     357.2    04-15-29.3    04-02-57
 .0    LJWTTTRXDD                                            28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 36  1390 F2 69   5 16 2440358 49.8 N   78.1 E 28 329   0.    0
   83.7    357.2   4 15 29.3  4  2 57.0  1390 F2      69/05/16
  2440358    49.8 N    078.1 E    5.3
                     0     83.7     357.2    04-15-29.3    04-02-57
 .0    LJWTTTRXDD                                            28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 36  1390 F3 69   5 16 2440358 49.8 N   78.1 E 28 329   0.    0
   83.7    357.2   4 15 29.3  4  2 57.0  1390 F3      69/05/16
  2440358    49.8 N    078.1 E    5.3
                     0     83.7     357.2    04-15-29.3    04-02-57
 .0    LJWTTTRXDD                                            28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 36  1390 F4 69   5 16 2440358 49.8 N   78.1 E 28 329   0.    0
   83.7    357.2   4 15 29.3  4  2 57.0  1390 F4      69/05/16
  2440358    49.8 N    078.1 E    5.3
                     0     83.7     357.2    04-15-29.3    04-02-57
 .0    LJWTTTRXDD                                            28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR
```

```
 37  7661 BM 69  5 31 2440373 50.0 N  77.7 E 28 329  0.   0
   83.5   357.5  5 14 27.8  5  1 56.5  7661 BM    69/05/31
  2440373   50.0 N   077.7 E   5.4
                 0    83.5    357.5   05-14-27.8   05-01-56
.5   FLCGTXFEBH                                    28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 37  7661 F1 69  5 31 2440373 50.0 N  77.7 E 28 329  0.   0
   83.5   357.5  5 14 27.8  5  1 56.5  7661 F1    69/05/31
  2440373   50.0 N   077.7 E   5.4
                 0    83.5    357.5   05-14-27.8   05-01-56
.5   FLCGTXFEBH                                    28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 37  7661 F2 69  5 31 2440373 50.0 N  77.7 E 28 329  0.   0
   83.5   357.5  5 14 27.8  5  1 56.5  7661 F2    69/05/31
  2440373   50.0 N   077.7 E   5.4
                 0    83.5    357.5   05-14-27.8   05-01-56
.5   FLCGTXFEBH                                    28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 37  7661 F2 69  5 31 2440373 50.0 N  77.7 E 28 329  0.   0
   83.5   357.5  5 14 27.8  5  1 56.5  7661 F2    69/05/31
  2440373   50.0 N   077.7 E   5.4
                 0    83.5    357.5   05-14-27.8   05-01-56
.5   FLCGTXFEBH                                    28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 37  7661 F3 69  5 31 2440373 50.0 N  77.7 E 28 329  0.   0
   83.5   357.5  5 14 27.8  5  1 56.5  7661 F3    69/05/31
  2440373   50.0 N   077.7 E   5.4
                 0    83.5    357.5   05-14-27.8   05-01-56
.5   FLCGTXFEBH                                    28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 38  1502 BM 69  7  4 2440407 49.7 N  78.2 E 28 329  0.   0
   83.8   357.1  2 59 29.7  2 46 56.7  1502 BM    69/07/04
  2440407   49.7 N   078.2 E   5.3
                 0    83.8    357.1   02-59-29.7   02-46-56
.7   EHORXMLYWP                                    28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 38  1502 F1 69  7  4 2440407 49.7 N  78.2 E 28 329  0.   0
   83.8   357.1  2 59 29.7  2 46 56.7  1502 F1    69/07/04
  2440407   49.7 N   078.2 E   5.3
                 0    83.8    357.1   02-59-29.7   02-46-56
.7   EHORXMLYWP                                    28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 38  1502 F2 69  7  4 2440407 49.7 N  78.2 E 28 329  0.   0
   83.8   357.1  2 59 29.7  2 46 56.7  1502 F2    69/07/04
  2440407   49.7 N   078.2 E   5.3
                 0    83.8    357.1   02-59-29.7   02-46-56
.7   EHORXMLYWP                                    28 ALMA
-ATA TO LAKE BAIKAL          329 EASTERN KAZAKH SSR

 38  1502 F3 69  7  4 2440407 49.7 N  [illegible]
   83.8   357.1  2 59 29.7  [illegible]
  2440407   49.7 N   [illegible]
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AD-A107 584 NAVAL POSTGRADUATE SCHOOL MONTEREY CA F/G 17/10
APPLICATION OF ACOUSTIC SIGNAL PROCESSING TECHNIQUES TO SEISMIC--ETC(U)
JUN 77 C E IRVINE
UNCLASSIFIED NPS-52IR77061 NL

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                    0      83.8     357.1    02-59-29.7    02-46-56
 .7   EHORXMLYWR                                            28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  38  1502 F4 69   7  4 2440407 49.7 N   78.2 E 28 329  0.    0
    83.8    357.1   2 59 29.7   2 46 56.7  1502 F4     69/07/04
   2440407    49.7 N    078.2 E    5.3
                    0      83.8     357.1    02-59-29.7    02-46-56
 .7   EHORXMLYWR                                            28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  39  1524 BM 69   7 21 2440424 49.8 N   78.1 E 28 329 33.   33
    83.7    357.2 10 57  2.1 10 44 29.8  1524 BM     69/07/21
   2440424    49.8 N    078.1 E    4.3
                   33      83.7     357.2    10-57-02.1    10-44-29
 .8   KCIDFVLFXJ                                            28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  39  1524 F1 69   7 21 2440424 49.8 N   78.1 E 28 329 33.   33
    83.7    357.2 10 57  2.1 10 44 29.8  1524 F1     69/07/21
   2440424    49.8 N    078.1 E    4.3
                   33      83.7     357.2    10-57-02.1    10-44-29
 .8   KCIDFVLFXJ                                            28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  39  1524 F2 69   7 21 2440424 49.8 N   78.1 E 28 329 33.   33
    83.7    357.2 10 57  2.1 10 44 29.8  1524 F2     69/07/21
   2440424    49.8 N    078.1 E    4.3
                   33      83.7     357.2    10-57-02.1    10-44-29
 .8   KCIDFVLFXJ                                            28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  39  1524 F2 69   7 21 2440424 49.8 N   78.1 E 28 329 33.   33
    83.7    357.2 10 57  2.1 10 44 29.8  1524 F2     69/07/21
   2440424    49.8 N    078.1 E    4.3
                   33      83.7     357.2    10-57-02.1    10-44-29
 .8   KCIDFVLFXJ                                            28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  39  1524 F3 69   7 21 2440424 49.8 N   78.1 E 28 329 33.   33
    83.7    357.2 10 57  2.1 10 44 29.8  1524 F3     69/07/21
   2440424    49.8 N    078.1 E    4.3
                   33      83.7     357.2    10-57-02.1    10-44-29
 .8   KCIDFVLFXJ                                            28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  40  1668 BM 69   9 11 2440476 49.8 N   78.0 E 28 329  0.    0
    83.7    357.3   4 14 29.8   4  1 57.5  1668 BM     69/09/11
   2440476    49.8 N    078.0 E    5.0
                    0      83.7     357.3    04-14-29.8    04-01-57
 .5   JDGTOSXLGV                                            28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

  40  1668 F1 69   9 11 2440476 49.8 N   78.0 E 28 329  0.    0
    83.7    357.3   4 14 29.8   4  1 57.5  1668 F1     69/09/11
   2440476    49.8 N    078.0 E    5.0
                    0      83.7     357.3    04-14-29.8    04-01-57
 .5   JDGTOSXLGV                                            28 ALMA
 -ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR
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 40  1668 F2 69   9 11 2440476 49.8 N   78.0 E 28 329  0.    0
   83.7    357.3   4 14 29.8   4   1 57.5  1668 F2      69/09/11
  2440476    49.8 N    078.0 E    5.0
                  0      83.7      357.3   04-14-29.8    04-01-57
.5    JDGTOSXLGV                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 40  1668 F3 69   9 11 2440476 49.8 N   78.0 E 28 329  0.    0
   83.7    357.3   4 14 29.8   4   1 57.5  1668 F3      69/09/11
  2440476    49.8 N    078.0 E    5.0
                  0      83.7      357.3   04-14-29.8    04-01-57
.5    JDGTOSXLGV                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 40  1668 F4 69   9 11 2440476 49.8 N   78.0 E 28 329  0.    0
   83.7    357.3   4 14 29.8   4   1 57.5  1668 F4      69/09/11
  2440476    49.8 N    078.0 E    5.0
                  0      83.7      357.3   04-14-29.8    04-01-57
.5    JDGTOSXLGV                                          28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 41  1695 BM 69   9 26 2440491 45.8 N   42.5 E 30 357  0.    0
   83.8     21.4   7 12 27.9   6  59 55.2  1695 BM      69/09/26
  2440491    45.8 N    042.5 E    5.6
                  0      83.8       21.4   07-12-27.9    06-59-55
.2    XLBWHDRSSO                                          30 MIDD
LE EAST - CRIMEA - BALKANS   357 SOUTHWESTERN RUSSIA

 41  1695 F1 69   9 26 2440491 45.8 N   42.5 E 30 357  0.    0
   83.8     21.4   7 12 27.9   6  59 55.2  1695 F1      69/09/26
  2440491    45.8 N    042.5 E    5.6
                  0      83.8       21.4   07-12-27.9    06-59-55
.2    XLBWHDRSSO                                          30 MIDD
LE EAST - CRIMEA - BALKANS   357 SOUTHWESTERN RUSSIA

 41  1695 F2 69   9 26 2440491 45.8 N   42.5 E 30 357  0.    0
   83.8     21.4   7 12 27.9   6  59 55.2  1695 F2      69/09/26
  2440491    45.8 N    042.5 E    5.6
                  0      83.8       21.4   07-12-27.9    06-59-55
.2    XLBWHDRSSO                                          30 MIDD
LE EAST - CRIMEA - BALKANS   357 SOUTHWESTERN RUSSIA

 41  1695 F3 69   9 26 2440491 45.8 N   42.5 E 30 357  0.    0
   83.8     21.4   7 12 27.9   6  59 55.2  1695 F3      69/09/26
  2440491    45.8 N    042.5 E    5.6
                  0      83.8       21.4   07-12-27.9    06-59-55
.2    XLBWHDRSSO                                          30 MIDD
LE EAST - CRIMEA - BALKANS   357 SOUTHWESTERN RUSSIA

 41  1695 F4 69   9 26 2440491 45.8 N   42.5 E 30 357  0.    0
   83.8     21.4   7 12 27.9   6  59 55.2  1695 F4      69/09/26
  2440491    45.8 N    042.5 E    5.6
                  0      83.8       21.4   07-12-27.9    06-59-55
.2    XLBWHDRSSO                                          30 MIDD
LE EAST - CRIMEA - BALKANS   357 SOUTHWESTERN RUSSIA

 42  1741 BM 69 10   1 2440496 49.8 N   78.1 E 28 329  0.    0
   83.7    357.2   4 15 29.8   4   2 57.5  1741 BM      69/10/01
  2440496    49.8 N    078.1 E    5.3
                  0      83.7      357.2   04-15-29.8    04-02-57
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.5   CBXCVMTTVL                                         28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 42  1741 F1 69 10  1 2440496 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 15 29.8  4  2 57.5  1741 F1     69/10/01
  2440496    49.8 N   078.1 E   5.3
                   0     83.7    357.2  04-15-29.8   04-02-57
.5   CBXCVMTTVL                                         28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 42  1741 F2 69 10  1 2440496 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 15 29.8  4  2 57.5  1741 F2     69/10/01
  2440496    49.8 N   078.1 E   5.3
                   0     83.7    357.2  04-15-29.8   04-02-57
.5   CBXCVMTTVL                                         28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 42  1741 F3 69 10  1 2440496 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 15 29.8  4  2 57.5  1741 F3     69/10/01
  2440496    49.8 N   078.1 E   5.3
                   0     83.7    357.2  04-15-29.8   04-02-57
.5   CBXCVMTTVL                                         28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 42  1741 F4 69 10  1 2440496 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 15 29.8  4  2 57.5  1741 F4     69/10/01
  2440496    49.8 N   078.1 E   5.3
                   0     83.7    357.2  04-15-29.8   04-02-57
.5   CBXCVMTTVL                                         28 ALMA
-ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 43  1750 BM 69 10 14 2440509 73.4 N  54.8 E 40 648  0.   0
   59.4      6.2  7 10 12.9  7  0  5.9  1750 BM     69/10/14
  2440509    73.4 N   054.8 E   6.1
                   0     59.4      6.2  07-10-12.9   07-00-05
.9   OELRVXWPBH                                         40 ARCT
IC ZONE                         648 NOVAYA ZEMLYA

 43  1750 F1 69 10 14 2440509 73.4 N  54.8 E 40 648  0.   0
   59.4      6.2  7 10 12.9  7  0  5.9  1750 F1     69/10/14
  2440509    73.4 N   054.8 E   6.1
                   0     59.4      6.2  07-10-12.9   07-00-05
.9   OELRVXWPBH                                         40 ARCT
IC ZONE                         648 NOVAYA ZEMLYA

 43  1750 F2 69 10 14 2440509 73.4 N  54.8 E 40 648  0.   0
   59.4      6.2  7 10 12.9  7  0  5.9  1750 F2     69/10/14
  2440509    73.4 N   054.8 E   6.1
                   0     59.4      6.2  07-10-12.9   07-00-05
.9   OELRVXWPBH                                         40 ARCT
IC ZONE                         648 NOVAYA ZEMLYA

 43  1750 F3 69 10 14 2440509 73.4 N  54.8 E 40 648  0.   0
   59.4      6.2  7 10 12.9  7  0  5.9  1750 F3     69/10/14
  2440509    73.4 N   054.8 E   6.1
                   0     59.4      6.2  07-10-12.9   07-00-05
.9   OELRVXWPBH                                         40 ARCT
IC ZONE                         648 NOVAYA ZEMLYA

 43  1750 F4 69 10 14 2440509 73.4 N  54.8 E 40 648  0.   0
```

```
 59.4      6.2  7 10 12.9  7  0  5.9  1750 F4    69/10/14
 2440509   73.4 N   054.8 E   6.1
               0     59.4      6.2   07-10-12.9   07-00-05
.9   OELRVXWPBH                                     40 ARCT
IC ZONE                        648 NOVAYA ZEMLYA

 44  1774 BM 69 11 30 2440556 49.9 N  79.0 E 28 329  0.   0
  83.6   356.6  3 45 28.7  3 32 57.1  1774 BM    69/11/30
 2440556   49.9 N   079.0 E   6.0
               0     83.6     356.6  03-45-28.7   03-32-57
.1   WXKPHKEFEL                                     28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 44  1774 F1 69 11 30 2440556 49.9 N  79.0 E 28 329  0.   0
  83.6   356.6  3 45 28.7  3 32 57.1  1774 F1    69/11/30
 2440556   49.9 N   079.0 E   6.0
               0     83.6     356.6  03-45-28.7   03-32-57
.1   WXKPHKEFEL                                     28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 44  1774 F2 69 11 30 2440556 49.9 N  79.0 E 28 329  0.   0
  83.6   356.6  3 45 28.7  3 32 57.1  1774 F2    69/11/30
 2440556   49.9 N   079.0 E   6.0
               0     83.6     356.6  03-45-28.7   03-32-57
.1   WXKPHKEFEL                                     28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 44  1774 F3 69 11 30 2440556 49.9 N  79.0 E 28 329  0.   0
  83.6   356.6  3 45 28.7  3 32 57.1  1774 F3    69/11/30
 2440556   49.9 N   079.0 E   6.0
               0     83.6     356.6  03-45-28.7   03-32-57
.1   WXKPHKEFEL                                     28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 44  1774 F4 69 11 30 2440556 49.9 N  79.0 E 28 329  0.   0
  83.6   356.6  3 45 28.7  3 32 57.1  1774 F4    69/11/30
 2440556   49.9 N   079.0 E   6.0
               0     83.6     356.6  03-45-28.7   03-32-57
.1   WXKPHKEFEL                                     28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 45  2019 BM 69 12  6 2440562 43.8 N  54.8 E 29 336  0.   0
  88.3    13.6  7 15 52.0  7  2 57.7  2019 BM    69/12/06
 2440562   43.8 N   054.8 E   5.8
               0     88.3      13.6  07-15-52.0   07-02-57
.7   RIELEVDTXR                                     29 WEST
ERN ASIA                       336 WESTERN KAZAKH SSR

 45  2019 F1 69 12  6 2440562 43.8 N  54.8 E 29 336  0.   0
  88.3    13.6  7 15 52.0  7  2 57.7  2019 F1    69/12/06
 2440562   43.8 N   054.8 E   5.8
               0     88.3      13.6  07-15-52.0   07-02-57
.7   RIELEVDTXR                                     29 WEST
ERN ASIA                       336 WESTERN KAZAKH SSR

 45  2019 F2 69 12  6 2440562 43.8 N  54.8 E 29 336  0.   0
  88.3    13.6  7 15 52.0  7  2 57.7  2019 F2    69/12/06
 2440562   43.8 N   054.8 E   5.8
               0     88.3      13.6  07-15-52.0   07-02-57
.7   RIELEVDTXR                                     29 WEST
```

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ERN ASIA                          336 WESTERN KAZAKH SSR

 45  2019 F3 69 12  6 2440562 43.8 N  54.8 E 29 336  0.   0
   88.3     13.6  7 15 52.0  7  2 57.7  2019 F3    69/12/06
  2440562   43.8 N   054.8 E   5.8
                 0     88.3      13.6   07-15-52.0   07-02-57
.7   RIELEVDTXR                                       29 WEST
ERN ASIA                          336 WESTERN KAZAKH SSR

 45  2019 F4 69 12  6 2440562 43.8 N  54.8 E 29 336  0.   0
   88.3     13.6  7 15 52.0  7  2 57.7  2019 F4    69/12/06
  2440562   43.8 N   054.8 E   5.8
                 0     88.3      13.6   07-15-52.0   07-02-57
.7   RIELEVDTXR                                       29 WEST
ERN ASIA                          336 WESTERN KAZAKH SSR

 46  2267 BM 69 12 28 2440584 50.0 N  77.7 E 28 329  0.   0
   83.5    357.5  3 59 29.2  3 46 57.9  2267 BM    69/12/28
  2440584   50.0 N   077.7 E   5.7
                 0     83.5     357.5   03-59-29.2   03-46-57
.9   JCTZLTZDXG                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 46  2267 F1 69 12 28 2440584 50.0 N  77.7 E 28 329  0.   0
   83.5    357.5  3 59 29.2  3 46 57.9  2267 F1    69/12/28
  2440584   50.0 N   077.7 E   5.7
                 0     83.5     357.5   03-59-29.2   03-46-57
.9   JCTZLTZDXG                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 46  2267 F2 69 12 28 2440584 50.0 N  77.7 E 28 329  0.   0
   83.5    357.5  3 59 29.2  3 46 57.9  2267 F2    69/12/28
  2440584   50.0 N   077.7 E   5.7
                 0     83.5     357.5   03-59-29.2   03-46-57
.9   JCTZLTZDXG                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 46  2267 F3 69 12 28 2440584 50.0 N  77.7 E 28 329  0.   0
   83.5    357.5  3 59 29.2  3 46 57.9  2267 F3    69/12/28
  2440584   50.0 N   077.7 E   5.7
                 0     83.5     357.5   03-59-29.2   03-46-57
.9   JCTZLTZDXG                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 46  2267 F4 69 12 28 2440584 50.0 N  77.7 E 28 329  0.   0
   83.5    357.5  3 59 29.2  3 46 57.9  2267 F4    69/12/28
  2440584   50.0 N   077.7 E   5.7
                 0     83.5     357.5   03-59-29.2   03-46-57
.9   JCTZLTZDXG                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 47  2272 BM 69 12 29 2440585 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 14 30.9  4  1 58.6  2272 BM    69/12/29
  2440585   49.8 N   078.1 E   4.6
                 0     83.7     357.2   04-14-30.9   04-01-58
.6   WMLWOYXRHF                                       28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 47  2272 F1 69 12 29 2440585 49.8 N  78.1 E 28 329  0.   0
   83.7    357.2  4 14 30.9  4  1 58.6  2272 F1    69/12/29
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  2440585    49.8 N    078.1 E    4.6
                   0      83.7     357.2    04-14-30.9    04-01-58
.6    WMLWOYXRHE                                           28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 47  2272 F2 69 12 29 2440585 49.8 N  78.1 E 28 329  0.   0
   83.7   357.2  4 14 30.9  4  1 58.6  2272 F2    69/12/29
  2440585    49.8 N    078.1 E    4.6
                   0      83.7     357.2    04-14-30.9    04-01-58
.6    WMLWOYXRHE                                           28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 47  2272 F3 69 12 29 2440585 49.8 N  78.1 E 28 329  0.   0
   83.7   357.2  4 14 30.9  4  1 58.6  2272 F3    69/12/29
  2440585    49.8 N    078.1 E    4.6
                   0      83.7     357.2    04-14-30.9    04-01-58
.6    WMLWOYXRHE                                           28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 47  2272 F4 69 12 29 2440585 49.8 N  78.1 E 28 329  0.   0
   83.7   357.2  4 14 30.9  4  1 58.6  2272 F4    69/12/29
  2440585    49.8 N    078.1 E    4.6
                   0      83.7     357.2    04-14-30.9    04-01-58
.6    WMLWOYXRHE                                           28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 48  2462 BM 70  7 24 2440792 49.8 N  78.1 E 28 329  0.   0
   83.7   357.2  4   9 29.6  3 56 57.3  2462 BM    70/07/24
  2440792    49.8 N    078.1 E    5.3
                   0      83.7     357.2    04-09-29.6    03-56-57
.3    VIJBLFXCFB                                           28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 48  2462 F1 70  7 24 2440792 49.8 N  78.1 E 28 329  0.   0
   83.7   357.2  4   9 29.6  3 56 57.3  2462 F1    70/07/24
  2440792    49.8 N    078.1 E    5.3
                   0      83.7     357.2    04-09-29.6    03-56-57
.3    VIJBLFXCFB                                           28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 48  2462 F2 70  7 24 2440792 49.8 N  78.1 E 28 329  0.   0
   83.7   357.2  4   9 29.6  3 56 57.3  2462 F2    70/07/24
  2440792    49.8 N    078.1 E    5.3
                   0      83.7     357.2    04-09-29.6    03-56-57
.3    VIJBLFXCFB                                           28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 48  2462 F3 70  7 24 2440792 49.8 N  78.1 E 28 329  0.   0
   83.7   357.2  4   9 29.6  3 56 57.3  2462 F3    70/07/24
  2440792    49.8 N    078.1 E    5.3
                   0      83.7     357.2    04-09-29.6    03-56-57
.3    VIJBLFXCFB                                           28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 48  2462 F4 70  7 24 2440792 49.8 N  78.1 E 28 329  0.   0
   83.7   357.2  4   9 29.6  3 56 57.3  2462 F4    70/07/24
  2440792    49.8 N    078.1 E    5.3
                   0      83.7     357.2    04-09-29.6    03-56-57
.3    VIJBLFXCFB                                           28 ALMA
-ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR
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 49  8817 BM 71   6   6 2441109 50.0 N   77.7 E 28 329  0.    0
   83.5    357.5   4 15 28.8   4   2 57.5   8817 BM      71/06/06
  2441109    50.0 N    077.7 E    5.5
                       0      83.5     357.5    04-15-28.8    04-02-57
.5   RMJXLSHGUF                                              28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 49  8817 F1 71   6   6 2441109 50.0 N   77.7 E 28 329  0.    0
   83.5    357.5   4 15 28.8   4   2 57.5   8817 F1      71/06/06
  2441109    50.0 N    077.7 E    5.5
                       0      83.5     357.5    04-15-28.8    04-02-57
.5   RMJXLSHGUF                                              28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 49  8817 F2 71   6   6 2441109 50.0 N   77.7 E 28 329  0.    0
   83.5    357.5   4 15 28.8   4   2 57.5   8817 F2      71/06/06
  2441109    50.0 N    077.7 E    5.5
                       0      83.5     357.5    04-15-28.8    04-02-57
.5   RMJXLSHGUF                                              28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 49  8817 F3 71   6   6 2441109 50.0 N   77.7 E 28 329  0.    0
   83.5    357.5   4 15 28.8   4   2 57.5   8817 F3      71/06/06
  2441109    50.0 N    077.7 E    5.5
                       0      83.5     357.5    04-15-28.8    04-02-57
.5   RMJXLSHGUF                                              28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 49  8817 F4 71   6   6 2441109 50.0 N   77.7 E 28 329  0.    0
   83.5    357.5   4 15 28.8   4   2 57.5   8817 F4 .    71/06/06
  2441109    50.0 N    077.7 E    5.5
                       0      83.5     357.5    04-15-28.8    04-02-57
.5   RMJXLSHGUE                                              28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 50  8835 BM 71   6 30 2441133 49.9 N   79.0 E 28 329  0.    0
   83.6    356.6   4   9 28.7   3 56 57.1   8835 BM      71/06/30
  2441133    49.9 N    079.0 E    5.4
                       0      83.6     356.6    04-09-28.7    03-56-57
.1   XGLHEOOZZV                                              28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 50  8835 F1 71   6 30 2441133 49.9 N   79.0 E 28 329  0.    0
   83.6    356.6   4   9 28.7   3 56 57.1   8835 F1      71/06/30
  2441133    49.9 N    079.0 E    5.4
                       0      83.6     356.6    04-09-28.7    03-56-57
.1   XGLHEOOZZV                                              28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 50  8835 F2 71   6 30 2441133 49.9 N   79.0 E 28 329  0.    0
   83.6    356.6   4   9 28.7   3 56 57.1   8835 F2      71/06/30
  2441133    49.9 N    079.0 E    5.4
                       0      83.6     356.6    04-09-28.7    03-56-57
.1   XGLHEOOZZV                                              28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 50  8835 F3 71   6 30 2441133 49.9 N   79.0 E 28 329  0.    0
   83.6    356.6   4   9 28.7   3 56 57.1   8835 F3      71/06/30
  2441133    49.9 N    079.0 F    5.4
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                    0     83.6     356.6    04-09-28.7    03-56-57
.1    XGLHE007ZV                                             28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 50   8835 F4 71   6 30 2441133 49.9 N   79.0 E 28 329  0.   0
   83.6    356.6   4   9 28.7   3 56 57.1  8835 F4     71/06/30
  2441133    49.9 N    079.0 E    5.4
                    0     83.6     356.6    04-09-28.7    03-56-57
.1    XGLHE007ZV                                             28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR


 51   8837 BM 71   7   2 2441135 67.3 N   63.5 E 29 335 33.  33
  66.0      4.3 17 10 46.5 16 59 56.5  8837 BM     71/07/02
 2441135    67.3 N    063.5 E    4.4
                 33     66.0       4.3    17-10-46.5    16-59-56.
5   UDESXLMUOZ                                             29 WESTE
RN ASIA                        335 URAL MOUNTAINS REGION

 51   8837 F1 71   7   2 2441135 67.3 N   63.5 E 29 335 33.  33
   66.0      4.3 17 10 46.5 16 59 56.5  8837 F1     71/07/02
  2441135    67.3 N    063.5 E    4.4
                   33     66.0       4.3    17-10-46.5    16-59-56
.5    UDESXLMUOZ                                             29 WEST
ERN ASIA                        335 URAL MOUNTAINS REGION

 51   8837 F2 71   7   2 2441135 67.3 N   63.5 E 29 335 33.  33
   66.0      4.3 17 10 46.5 16 59 56.5  8837 F2     71/07/02
  2441135    67.3 N    063.5 E    4.4
                   33     66.0       4.3    17-10-46.5    16-59-56
.5    UDESXLMUOZ                                             29 WEST
ERN ASIA                        335 URAL MOUNTAINS REGION

 51   8837 F3 71   7   2 2441135 67.3 N   63.5 E 29 335 33.  33
   66.0      4.3 17 10 46.5 16 59 56.5  8837 F3     71/07/02
  2441135    67.3 N    063.5 E    4.4
                   33     66.0       4.3    17-10-46.5    16-59-56
.5    UDESXLMUOZ                                             29 WEST
ERN ASIA                        335 URAL MOUNTAINS REGION

 51   8837 F4 71   7   2 2441135 67.3 N   63.5 E 29 335 33.  33
   66.0      4.3 17 10 46.5 16 59 56.5  8837 F4     71/07/02
  2441135    67.3 N    063.5 E    4.4
                   33     66.0       4.3    17-10-46.5    16-59-56
.5    UDESXLMUOZ                                             29 WEST
ERN ASIA                        335 URAL MOUNTAINS REGION

 52   9218 BM 71   7 10 2441143 64.1 N   55.3 E 29 335  0.   0
   68.5      8.6 17 11  5.6 16 59 59.5  9218 BM     71/07/10
  2441143    64.1 N    055.3 E    5.3
                    0     68.5       8.6    17-11-05.6    16-59-59
.5    UVFFVXWBLC                                             29 WEST
ERN ASIA                        335 URAL MOUNTAINS REGION

 52   9218 F1 71   7 10 2441143 64.1 N   55.3 E 29 335  0.   0
   68.5      8.6 17 11  5.6 16 59 59.5  9218 F1     71/07/10
  2441143    64.1 N    055.3 E    5.3
                    0     68.5       8.6    17-11-05.6    16-59-59
.5    UVFFVXWBLC                                             29 WEST
ERN ASIA                        335 URAL MOUNTAINS REGION
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 52  9218 F2 71   7 10 2441143 64.1 N  55.3 E 29 335  0.   0
   68.5       8.6 17 11  5.6 16 59 59.5  9218 F2     71/07/10
  2441143    64.1 N    055.3 E    5.3
                   0     68.5       8.6    17-11-05.6   16-59-59
.5   UVFFVXWBLC                                        29 WEST
ERN ASIA                           335 URAL MOUNTAINS REGION

 52  9218 F3 71   7 10 2441143 64.1 N  55.3 E 29 335  0.   0
   68.5       8.6 17 11  5.6 16 59 59.5  9218 F3     71/07/10
  2441143    64.1 N    055.3 E    5.3
                   0     68.5       8.6    17-11-05.6   16-59-59
.5   UVFFVXWBLC                                        29 WEST
ERN ASIA                           335 URAL MOUNTAINS REGION

 52  9218 F4 71   7 10 2441143 64.1 N  55.3 E 29 335  0.   0
   68.5       8.6 17 11  5.6 16 59 59.5  9218 F4     71/07/10
  2441143    64.1 N    055.3 E    5.3
                   0     68.5       8.6    17-11-05.6   16-59-59
.5   UVFFVXWBLC                                        29 WEST
ERN ASIA                           335 URAL MOUNTAINS REGION

 53  8713 BM 71   9 19 2441214 57.8 N  41.1 E 49 724 33.  33
   72.3      17.6 11 11 31.6 11  0  2.0  8713 BM     71/09/19
  2441214    57.8 N    041.1 E    4.5
                  33     72.3      17.6    11-11-31.6   11-00-02
.0   FSLMVFXWED                                        49 NORT
HERN ASIA                          724 WESTERN RUSSIA

 53  8713 F1 71   9 19 2441214 57.8 N  41.1 E 49 724 33.  33
   72.3      17.6 11 11 31.6 11  0  2.0  8713 F1     71/09/19
  2441214    57.8 N    041.1 E    4.5
                  33     72.3      17.6    11-11-31.6   11-00-02
.0   FSLMVFXWED                                        49 NORT
HERN ASIA                          724 WESTERN RUSSIA

 53  8713 F2 71   9 19 2441214 57.8 N  41.1 E 49 724 33.  33
   72.3      17.6 11 11 31.6 11  0  2.0  8713 F2     71/09/19
  2441214    57.8 N    041.1 E    4.5
                  33     72.3      17.6    11-11-31.6   11-00-02
.0   FSLMVFXWED                                        49 NORT
HERN ASIA                          724 WESTERN RUSSIA

 53  8713 F3 71   9 19 2441214 57.8 N  41.1 E 49 724 33.  33
   72.3      17.6 11 11 31.6 11  0  2.0  8713 F3     71/09/19
  2441214    57.8 N    041.1 E    4.5
                  33     72.3      17.6    11-11-31.6   11-00-02
.0   FSLMVFXWED                                        49 NORT
HERN ASIA                          724 WESTERN RUSSIA

 53  8713 F4 71   9 19 2441214 57.8 N  41.1 E 49 724 33.  33
   72.3      17.6 11 11 31.6 11  0  2.0  8713 F4     71/09/19
  2441214    57.8 N    041.1 E    4.5
                  33     72.3      17.6    11-11-31.6   11-00-02
.0   FSLMVFXWED                                        49 NORT
HERN ASIA                          724 WESTERN RUSSIA

 54  9136 BM 71 10   4 2441229 61.6 N  47.1 E 49 724 13.  13
   69.9      13.2 10 11 15.0 10  0   .9  9136 BM     71/10/04
  2441229    61.6 N    047.1 E    5.1
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                13     69.9      13.2   10-11-15.0    10-00-00
.9   MHSXWUIWDL                                         49 NORT
HERN ASIA                         724 WESTERN RUSSIA

 54  9136 F1 71 10   4 2441229 61.6 N  47.1 E 49 724 13.  13
   69.9     13.2 10 11 15.0 10   0    .9  9136 F1     71/10/04
  2441229    61.6 N    047.1 E    5.1
                13     69.9      13.2   10-11-15.0    10-00-00
.9   MHSXWUIWDL                                         49 NORT
HERN ASIA                         724 WESTERN RUSSIA

 54  9136 F2 71 10   4 2441229 61.6 N  47.1 E 49 724 13.  13
   69.9     13.2 10 11 15.0 10   0    .9  9136 F2     71/10/04
  2441229    61.6 N    047.1 E    5.1
                13     69.9      13.2   10-11-15.0    10-00-00
.9   MHSXWUIWDL                                         49 NORT
HERN ASIA                         724 WESTERN RUSSIA

 54  9136 F3 71 10   4 2441229 61.6 N  47.1 E 49 724 13.  13
   69.9     13.2 10 11 15.0 10   0    .9  9136 F3     71/10/04
  2441229    61.6 N    047.1 E    5.1
                13     69.9      13.2   10-11-15.0    10-00-00
.9   MHSXWUIWDL                                         49 NORT
HERN ASIA                         724 WESTERN RUSSIA

 54  9136 F4 71 10   4 2441229 61.6 N  47.1 E 49 724 13.  13
   69.9     13.2 10 11 15.0 10   0    .9  9136 F4     71/10/04
  2441229    61.6 N    047.1 E    5.1
                13     69.9      13.2   10-11-15.0    10-00-00
.9   MHSXWUIWDL                                         49 NORT
HERN ASIA                         724 WESTERN RUSSIA

 55  9253 BM 71 10   9 2441234 50.0 N  77.0 E 28 329  0.   0
   83.6    357.9   6 15 28.8  6   2 57.4  9253 BM     71/10/09
  2441234    50.0 N    077.0 E    5.4
                 0     83.6     357.9   06-15-28.8    06-02-57
.4   IXZKSOUTYL                                         28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 55  9253 F1 71 10   9 2441234 50.0 N  77.0 E 28 329  0.   0
   83.6    357.9   6 15 28.8  6   2 57.4  9253 F1     71/10/09
  2441234    50.0 N    077.0 E    5.4
                 0     83.6     357.9   06-15-28.8    06-02-57
.4   IXZKSOUTYL                                         28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 55  9253 F2 71 10   9 2441234 50.0 N  77.0 E 28 329  0.   0
   83.6    357.9   6 15 28.8  6   2 57.4  9253 F2     71/10/09
  2441234    50.0 N    077.0 E    5.4
                 0     83.6     357.9   06-15-28.8    06-02-57
.4   IXZKSOUTYL                                         28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 55  9253 F3 71 10   9 2441234 50.0 N  77.0 E 28 329  0.   0
   83.6    357.9   6 15 28.8  6   2 57.4  9253 F3     71/10/09
  2441234    50.0 N    077.0 E    5.4
                 0     83.6     357.9   06-15-28.8    06-02-57
.4   IXZKSOUTYL                                         28 ALMA
-ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR
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 55  9253 F4 71 10  9 2441234 50.0 N  77.0 E 28 329  0.   0
  83.6   357.9  6 15 28.8  6  2 57.4  9253 F4    71/10/09
 2441234   50.0 N   077.0 E   5.4
                   0     83.6    357.9   06-15-28.8   06-02-57
.4   IXZKSOUTYL                                        28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 56  9222 BM 71 10 21 2441246 50.0 N  77.0 E 28 329  0.   0
  83.6   357.9  6 15 29.0  6  2 57.6  9222 BM    71/10/21
 2441246   50.0 N   077.0 E   5.6
                   0     83.6    357.9   06-15-29.0   06-02-57
.6   ZXGUDBLGDK                                        28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 56  9222 F1 71 10 21 2441246 50.0 N  77.0 E 28 329  0.   0
  83.6   357.9  6 15 29.0  6  2 57.6  9222 F1    71/10/21
 2441246   50.0 N   077.0 E   5.6
                   0     83.6    357.9   06-15-29.0   06-02-57
.6   ZXGUDBLGDK                                        28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 56  9222 F2 71 10 21 2441246 50.0 N  77.0 E 28 329  0.   0
  83.6   357.9  6 15 29.0  6  2 57.6  9222 F2    71/10/21
 2441246   50.0 N   077.0 E   5.6
                   0     83.6    357.9   06-15-29.0   06-02-57
.6   ZXGUDBLGDK                                        28 ALMA
-ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 56  9222 F3 71 10 21 2441246 50.0 N  77.0 E 28 329  0.   0
  83.6   357.9  6 15 29.0  6  2 57.6  9222 F3    71/10/21
 2441246   50.0 N   077.0 E   5.6
                   0     83.6    357.9   06-15-29.0   06-02-57.
6   ZXGUDBLGDK                                         28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 56  9222 F4 71 10 21 2441246 50.0 N  77.0 E 28 329  0.   0
  83.6   357.9  6 15 29.0  6  2 57.6  9222 F4    71/10/21
 2441246   50.0 N   077.0 E   5.6
                   0     83.6    357.9   06-15-29.0   06-02-57.
6   ZXGUDBLGDK                                         28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 57  9223 BM 71 10 22 2441247 51.5 N  54.5 E 49 724  6.   6
  80.7    12.0  5 12 16.0  4 59 59.4  9223 BM    71/10/22
 2441247   51.5 N   054.5 E   5.3
                   6     80.7     12.0   05-12-16.0   04-59-59.
4   FLXYEHYFYY                                         49 NORTH
ERN ASIA                       724 WESTERN RUSSIA

 57  9223 F1 71 10 22 2441247 51.5 N  54.5 E 49 724  6.   6
  80.7    12.0  5 12 16.0  4 59 59.4  9223 F1    71/10/22
 2441247   51.5 N   054.5 E   5.3
                   6     80.7     12.0   05-12-16.0   04-59-59.
4   FLXYEHYFYY                                         49 NORTH
ERN ASIA                       724 WESTERN RUSSIA

 57  9223 F2 71 10 22 2441247 51.5 N  54.5 E 49 724  6.   6
  80.7    12.0  5 12 16.0  4 59 59.4  9223 F2    71/10/22
 2441247   51.5 N   054.5 E   5.3
                   6     80.7     12.0   05-12-16.0   04-59-59.
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4    FLXYEHYFYY                                            49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 57  9223 F3 71 10 22 2441247 51.5 N   54.5 E 49 724  6.   6
  80.7     12.0  5 12 16.0  4 59 59.4  9223 F3     71/10/22
 2441247    51.5 N    054.5 F    5.3
                  6     80.7      12.0   05-12-16.0   04-59-59.
4    FLXYEHYFYY                                            49 NORTH
FRN ASIA                         724 WESTERN RUSSIA

 57  9223 F4 71 10 22 2441247 51.5 N   54.5 E 49 724  6.   6
  80.7     12.0  5 12 16.0  4 59 59.4  9223 F4     71/10/22
 2441247    51.5 N    054.5 E    5.3
                  6     80.7      12.0   05-12-16.0   04-59-59.
4    FLXYFHYFYY                                            49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 58  9226 BM 71 11 29 2441285 49.7 N   78.1 E 28 329  0.   0
  83.8    357.2  6 15 29.9  6  2 56.9  9226 BM     71/11/29
 2441285    49.7 N    078.1 F    5.5
                  0     83.8     357.2   06-15-29.9   06-02-56.
9    LXGIPTGIFS                                            28 ALMA-
ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 58  9226 F1 71 11 29 2441285 49.7 N   78.1 E 28 329  0.   0
  83.8    357.2  6 15 29.9  6  2 56.9  9226 F1     71/11/29
 2441285    49.7 N    078.1 F    5.5
                  0     83.8     357.2   06-15-29.9   06-02-56.
9    LXGIPTGIFS                                            28 ALMA-
ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 58  9226 F2 71 11 29 2441285 49.7 N   78.1 E 28 329  0.   0
  83.8    357.2  6 15 29.9  6  2 56.9  9226 F2     71/11/29
 2441285    49.7 N    078.1 E    5.5
                  0     83.8     357.2   06-15-29.9   06-02-56.
9    LXGIPTGIFS                                            28 ALMA-
ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 58  9226 F3 71 11 29 2441285 49.7 N   78.1 E 28 329  0.   0
  83.8    357.2  6 15 29.9  6  2 56.9  9226 F3     71/11/29
 2441285    49.7 N    078.1 F    5.5
                  0     83.8     357.2   06-15-29.9   06-02-56.
9    LXGIPTGIFS                                            28 ALMA-
ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 58  9226 F4 71 11 29 2441285 49.7 N   78.1 E 28 329  0.   0
  83.8    357.2  6 15 29.9  6  2 56.9  9226 F4     71/11/29
 2441285    49.7 N    078.1 F    5.5
                  0     83.8     357.2   06-15-29.9   06-02-56.
9    LXGIPTGIFS                                            28 ALMA-
ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 59  9336 BM 71 12 22 2441308 47.8 N   48.2 F 29 336  0.   0
  83.2     17.0  7 12 25.8  6 59 56.7  9336 BM     71/12/22
 2441308    47.8 N    048.2 F    6.0
                  0     83.2      17.0   07-12-25.8   06-59-56.
7    PXJDTUVILZ                                            29 WESTE
RN ASIA                          336 WESTERN KAZAKH SSR

 59  9336 F1 71 12 22 2441308 47.8 N   48.2 E 29 336  0.   0
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  83.2      17.0   7 12 25.8   6 59 56.7   9336 F1      71/12/22
 2441308    47.8 N    048.2 E    6.0
                  0      83.2       17.0    07-12-25.8    06-59-56.
7   PXJDTUVTLZ                                              29 WESTE
RN ASIA                          336 WESTERN KAZAKH SSR

 59  9336 F2 71 12 22 2441308 47.8 N  48.2 E 29 336  0.   0
  83.2      17.0   7 12 25.8   6 59 56.7   9336 F2      71/12/22
 2441308    47.8 N    048.2 E    6.0
                  0      83.2       17.0    07-12-25.8    06-59-56.
7   PXJDTUVTLZ                                              29 WESTE
RN ASIA                          336 WESTERN KAZAKH SSR

 59  9336 F3 71 12 22 2441308 47.8 N  48.2 E 29 336  0.   0
  83.2      17.0   7 12 25.8   6 59 56.7   9336 F3      71/12/22
 2441308    47.8 N    048.2 E    6.0
                  0      83.2       17.0    07-12-25.8    06-59-56.
7   PXJDTUVTLZ                                              29 WESTE
RN ASIA                          336 WESTERN KAZAKH SSR

 59  9336 F4 71 12 22 2441308 47.8 N  48.2 E 29 336  0.   0
  83.2      17.0   7 12 25.8   6 59 56.7   9336 F4      71/12/22
 2441308    47.8 N    048.2 E    6.0
                  0      83.2       17.0    07-12-25.8    06-59-56.
7   PXJDTUVTLZ                                              29 WESTE
RN ASIA                          336 WESTERN KAZAKH SSR

 60  9339 BM 71 12 30 2441316 47.9 N  78.1 E 28 329  0.   0
  85.6     357.1   6 33 30.6   6 20 48.5   9339 BM      71/12/30
 2441316    47.9 N    078.1 E    5.8
                  0      85.6      357.1    06-33-30.6    06-20-48.
5   EXLKKFEZTR                                              28 ALMA-
ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 60  9339 F1 71 12 30 2441316 47.9 N  78.1 E 28 329  0.   0
  85.6     357.1   6 33 30.6   6 20 48.5   9339 F1      71/12/30
 2441316    47.9 N    078.1 E    5.8
                  0      85.6      357.1    06-33-30.6    06-20-48.
5   EXLKKFEZTR                                              28 ALMA-
ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 60  9339 F2 71 12 30 2441316 47.9 N  78.1 E 28 329  0.   0
  85.6     357.1   6 33 30.6   6 20 48.5   9339 F2      71/12/30
 2441316    47.9 N    078.1 E    5.8
                  0      85.6      357.1    06-33-30.6    06-20-48.
5   EXLKKFEZTR                                              28 ALMA-
ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 60  9339 F3 71 12 30 2441316 47.9 N  78.1 E 28 329  0.   0
  85.6     357.1   6 33 30.6   6 20 48.5   9339 F3      71/12/30
 2441316    47.9 N    078.1 E    5.8
                  0      85.6      357.1    06-33-30.6    06-20-48.
5   EXLKKFEZTR                                              28 ALMA-
ATA TO LAKE BAIKAL               329 EASTERN KAZAKH SSR

 60  9339 F4 71 12 30 2441316 47.9 N  78.1 E 28 329  0.   0
  85.6     357.1   6 33 30.6   6 20 48.5   9339 F4      71/12/30
 2441316    47.9 N    078.1 E    5.8
                  0      85.6      357.1    06-33-30.6    06-20-48.
5   EXLKKFEZTR                                              28 ALMA-
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ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 61  9788 BM 72  2 10 2441358 50.0 N  79.0 E 28 329  0.   0
  83.5   356.6  5 15 28.8  5  2 57.8  9788 BM    72/02/10
 2441358   50.0 N   079.0 E   5.5
                  0     83.5    356.6   05-15-28.8   05-02-57.
8   GEECLXWCIS                                       28 ALMA-
ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 61  9788 F1 72  2 10 2441358 50.0 N  79.0 E 28 329  0.   0
  83.5   356.6  5 15 28.8  5  2 57.8  9788 F1    72/02/10
 2441358   50.0 N   079.0 E   5.5
                  0     83.5    356.6   05-15-28.8   05-02-57.
8   GEECLXWCIS                                       28 ALMA-
ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 61  9788 F2 72  2 10 2441358 50.0 N  79.0 E 28 329  0.   0
  83.5   356.6  5 15 28.8  5  2 57.8  9788 F2    72/02/10
 2441358   50.0 N   079.0 E   5.5
                  0     83.5    356.6   05-15-28.8   05-02-57.
8   GEECLXWCIS                                       28 ALMA-
ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 61  9788 F3 72  2 10 2441358 50.0 N  79.0 E 28 329  0.   0
  83.5   356.6  5 15 28.8  5  2 57.8  9788 F3    72/02/10
 2441358   50.0 N   079.0 E   5.5
                  0     83.5    356.6   05-15-28.8   05-02-57.
8   GEECLXWCIS                                       28 ALMA-
ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 61  9788 F4 72  2 10 2441358 50.0 N  79.0 E 28 329  0.   0
  83.5   356.6  5 15 28.8  5  2 57.8  9788 F4    72/02/10
 2441358   50.0 N   079.0 E   5.5
                  0     83.5    356.6   05-15-28.8   05-02-57.
8   GEFCLXWCIS                                       28 ALMA-
ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 62  9791 BM 72  3 10 2441387 50.0 N  78.0 E 28 329  0.   0
  83.5   357.3  5  9 30.2  4 56 59.0  9791 BM    72/03/10
 2441387   50.0 N   078.0 E   5.5
                  0     83.5    357.3   05-09-30.2   04-56-59.
0   DXLVJJYZMZ                                       28 ALMA-
ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 62  9791 F1 72  3 10 2441387 50.0 N  78.0 E 28 329  0.   0
  83.5   357.3  5  9 30.2  4 56 59.0  9791 F1    72/03/10
 2441387   50.0 N   078.0 E   5.5
                  0     83.5    357.3   05-09-30.2   04-56-59.
0   DXLVJJYZMZ                                       28 ALMA-
ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 62  9791 F2 72  3 10 2441387 50.0 N  78.0 E 28 329  0.   0
  83.5   357.3  5  9 30.2  4 56 59.0  9791 F2    72/03/10
 2441387   50.0 N   078.0 E   5.5
                  0     83.5    357.3   05-09-30.2   04-56-59.
0   DXLVJJYZMZ                                       28 ALMA-
ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 62  9791 F3 72  3 10 2441387 50.0 N  78.0 E 28 329  0.   0
  83.5   357.3  5  9 30.2  4 56 59.0  9791 F3    72/03/10
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 2441387   50.0 N   078.0 E   5.5
                  0    83.5     357.3   05-09-30.2   04-56-59.
0   DXLVJJYZMZ                                          28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 62  9791 F4 72  3 10 2441387 50.0 N  78.0 E 28 329  0.   0
  83.5   357.3  5  9 30.2  4 56 59.0  9791 F4     72/03/10
 2441387   50.0 N   078.0 E   5.5
                  0    83.5     357.3   05-09-30.2   04-56-59.
0   DXLVJJYZMZ                                          28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 63  9792 BM 72  3 28 2441405 49.7 N  78.1 E 28 329  0.   0
  83.8   357.2  4 34 30.2  4 21 57.2  9792 BM     72/03/28
 2441405   49.7 N   078.1 E   5.2
                  0    83.8     357.2   04-34-30.2   04-21-57.
2   VELMSGXWPF                                          28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 63  9792 F1 72  3 28 2441405 49.7 N  78.1 E 28 329  0.   0
  83.8   357.2  4 34 30.2  4 21 57.2  9792 F1     72/03/28
 2441405   49.7 N   078.1 E   5.2
                  0    83.8     357.2   04-34-30.2   04-21-57.
2   VELMSGXWPF                                          28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 63  9792 F2 72  3 28 2441405 49.7 N  78.1 E 28 329  0.   0
  83.8   357.2  4 34 30.2  4 21 57.2  9792 F2     72/03/28
 2441405   49.7 N   078.1 E   5.2
                  0    83.8     357.2   04-34-30.2   04-21-57.
2   VELMSGXWPF                                          28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 63  9792 F3 72  3 28 2441405 49.7 N  78.1 E 28 329  0.   0
  83.8   357.2  4 34 30.2  4 21 57.2  9792 F3     72/03/28
 2441405   49.7 N   078.1 E   5.2
                  0    83.8     357.2   04-34-30.2   04-21-57.
2   VELMSGXWPF                                          28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 63  9792 F4 72  3 28 2441405 49.7 N  78.1 E 28 329  0.   0
  83.8   357.2  4 34 30.2  4 21 57.2  9792 F4     72/03/28
 2441405   49.7 N   078.1 E   5.2
                  0    83.8     357.2   04-34-30.2   04-21-57.
2   VELMSGXWPF                                          28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 64  9757 BM 72  4 11 2441419 37.3 N  62.0 E 29 340 33.  33
  95.6     9.4  6 13 28.0  5 59 59.5  9757 BM     72/04/11
 2441419   37.3 N   062.0 E   4.9
                 33    95.6       9.4   06-13-28.0   05-59-59.
5   GOXVKLDJZG                                          29 WESTE
RN ASIA                       340 TURKMEN SSR

 64  9757 F1 72  4 11 2441419 37.3 N  62.0 E 29 340 33.  33
  95.6     9.4  6 13 28.0  5 59 59.5  9757 F1     72/04/11
 2441419   37.3 N   062.0 E   4.9
                 33    95.6       9.4   06-13-28.0   05-59-59.
5   GOXVKLDJZG                                          29 WESTE
RN ASIA                       340 TURKMEN SSR
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 64  9757 F2 72   4 11 2441419 37.3 N   62.0 E 29 340 33.  33
  95.6       9.4  6 13 28.0  5 59 59.5  9757 F2     72/04/11
 2441419    37.3 N    062.0 E    4.9
                 33      95.6       9.4   06-13-28.0   05-59-59.
5   GOXVKLDJ7G                                        29 WESTE
RN ASIA                        340 TURKMEN SSR

 64  9757 F3 72   4 11 2441419 37.3 N   62.0 E 29 340 33.  33
  95.6       9.4  6 13 28.0  5 59 59.5  9757 F3     72/04/11
 2441419    37.3 N    062.0 F    4.9
                 33      95.6       9.4   06-13-28.0   05-59-59.
5   GOXVKLDJ7G                                        29 WESTE
RN ASIA                        340 TURKMEN SSR

 64  9757 F4 72   4 11 2441419 37.3 N   62.0 E 29 340 33.  33
  95.6       9.4  6 13 28.0  5 59 59.5  9757 F4     72/04/11
 2441419    37.3 N    062.0 E    4.9
                 33      95.6       9.4   06-13-28.0   05-59-59.
5   GOXVKLDJ7G                                        29 WESTE
RN ASIA                        340 TURKMEN SSR

 65  9950 BM 72   6   7 2441476 49.8 N   78.2 E 28 329  0.   0
  83.7    357.1   1 40 29.9  1 27 57.6  9950 BM     72/06/07
 2441476    49.8 N    078.2 E     5.5
                  0      83.7     357.1   01-40-29.9   01-27-57.
6   VTBGLHWWPX                                        28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 65  9950 F1 72   6   7 2441476 49.8 N   78.2 E 28 329  0.   0
  83.7    357.1   1 40 29.9  1 27 57.6  9950 F1     72/06/07
 2441476    49.8 N    078.2 E     5.5
                  0      83.7     357.1   01-40-29.9   01-27-57.
6   VTBGLHWWPX                                        28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 65  9950 F2 72   6   7 2441476 49.8 N   78.2 E 28 329  0.   0
  83.7    357.1   1 40 29.9  1 27 57.6  9950 F2     72/06/07
 2441476    49.8 N    078.2 E     5.5
                  0      83.7     357.1   01-40-29.9   01-27-57.
6   VTBGLHWWPX                                        28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 65  9950 F3 72   6   7 2441476 49.8 N   78.2 E 28 329  0.   0
  83.7    357.1   1 40 29.9  1 27 57.6  9950 F3     72/06/07
 2441476    49.8 N    078.2 F     5.5
                  0      83.7     357.1   01-40-29.9   01-27-57.
6   VTBGLHWWPX                                        28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 65  9950 F4 72   6   7 2441476 49.8 N   78.2 E 28 329  0.   0
  83.7    357.1   1 40 29.9  1 27 57.6  9950 F4     72/06/07
 2441476    49.8 N    078.2 F     5.5
                  0      83.7     357.1   01-40-29.9   01-27-57.
6   VTBGLHWWPX                                        28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 66 10178 BM 72   7   9 2441508 52.0 N   31.0 E 49 724 33.  33
  75.0     25.7   7 12  4.2  7  0 19.2 10178 BM     72/07/09
 2441508    52.0 N    031.0 E    4.6
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                 33    75.0     25.7   07-12-04.2   07-00-19.
2   IFBVKLCXZP                                       49 NORTH
ERN ASIA                       724 WESTERN RUSSIA

 66 10178 F1 72  7  9 2441508 52.0 N  31.0 E 49 724 33.  33
  75.0     25.7  7 12  4.2  7  0 19.2 10178 F1    72/07/09
 2441508   52.0 N   031.0 F   4.6
                 33    75.0     25.7   07-12-04.2   07-00-19.
2   IFBVKLCXZP                                       49 NORTH
ERN ASIA                       724 WESTERN RUSSIA

 66 10178 F2 72  7  9 2441508 52.0 N  31.0 E 49 724 33.  33
  75.0     25.7  7 12  4.2  7  0 19.2 10178 F2    72/07/09
 2441508   52.0 N   031.0 F   4.6
                 33    75.0     25.7   07-12-04.2   07-00-19.
2   IFBVKLCX7P                                       49 NORTH
ERN ASIA                       724 WESTERN RUSSIA

 66 10178 F3 72  7  9 2441508 52.0 N  31.0 E 49 724 33.  33
  75.0     25.7  7 12  4.2  7  0 19.2 10178 F3    72/07/09
 2441508   52.0 N   031.0 F   4.6
                 33    75.0     25.7   07-12-04.2   07-00-19.
2   IFBVKLCX7P                                       49 NORTH
ERN ASIA                       724 WESTERN RUSSIA

 66 10178 F4 72  7  9 2441508 52.0 N  31.0 E 49 724 33.  33
  75.0     25.7  7 12  4.2  7  0 19.2 10178 F4    72/07/09
 2441508   52.0 N   031.0 F   4.6
                 33    75.0     25.7   07-12-04.2   07-00-19.
2   IFBVKLCXZP                                       49 NORTH
ERN ASIA                       724 WESTERN RUSSIA

 67 10192 BM 72  8 16 2441546 49.8 N  78.1 E 28 329  0.   0
  83.7    357.2  3 29 30.0  3 16 57.7 10192 BM    72/08/16
 2441546   49.8 N   078.1 F   5.2
                  0    83.7    357.2   03-29-30.0   03-16-57.
7   GWPVKLXOCM                                       28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 67 10192 F1 72  8 16 2441546 49.8 N  78.1 E 28 329  0.   0
  83.7    357.2  3 29 30.0  3 16 57.7 10192 F1    72/08/16
 2441546   49.8 N   078.1 E   5.2
                  0    83.7    357.2   03-29-30.0   03-16-57.
7   GWPVKLXOCM                                       28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 67 10192 F2 72  8 16 2441546 49.8 N  78.1 E 28 329  0.   0
  83.7    357.2  3 29 30.0  3 16 57.7 10192 F2    72/08/16
 2441546   49.8 N   078.1 F   5.2
                  0    83.7    357.2   03-29-30.0   03-16-57.
7   GWPVKLXOCM                                       28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

 67 10192 F3 72  8 16 2441546 49.8 N  78.1 E 28 329  0.   0
  83.7    357.2  3 29 30.0  3 16 57.7 10192 F3    72/08/16
 2441546   49.8 N   078.1 E   5.2
                  0    83.7    357.2   03-29-30.0   03-16-57.
7   GWPVKLXOCM                                       28 ALMA-
ATA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR
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 67 10192 F4 72  8 16 2441546 49.8 N  78.1 E 28 329  0.   0
  83.7     357.2  3 29 30.0  3 16 57.7 10192 F4     72/08/16
 2441546    49.8 N    078.1 E    5.2
                  0      83.7     357.2   03-29-30.0   03-16-57.
7   GWPVKLXOCM                                         28 ALMA-
ATA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

 68 10195 BM 72  8 20 2441550 49.5 N  48.2 E 29 336  0.   0
  81.6     16.5  3 12 19.5  2 59 58.6 10195 BM     72/08/20
 2441550    49.5 N    048.2 E    5.7
                  0      81.6      16.5   03-12-19.5   02-59-58.
6   FCTSXZZGDL                                         29 WESTE
RN ASIA                      336 WESTERN KAZAKH SSR

 68 10195 F1 72  8 20 2441550 49.5 N  48.2 E 29 336  0.   0
  81.6     16.5  3 12 19.5  2 59 58.6 10195 F1     72/08/20
 2441550    49.5 N    048.2 E    5.7
                  0      81.6      16.5   03-12-19.5   02-59-58.
6   FCTSXZZGDL                                         29 WESTE
RN ASIA                      336 WESTERN KAZAKH SSR

 68 10195 F2 72  8 20 2441550 49.5 N  48.2 E 29 336  0.   0
  81.6     16.5  3 12 19.5  2 59 58.6 10195 F2     72/08/20
 2441550    49.5 N    048.2 E    5.7
                  0      81.6      16.5   03-12-19.5   02-59-58.
6   FCTSXZZGDL                                         29 WESTE
RN ASIA                      336 WESTERN KAZAKH SSR

 68 10195 F3 72  8 20 2441550 49.5 N  48.2 E 29 336  0.   0
  81.6     16.5  3 12 19.5  2 59 58.6 10195 F3     72/08/20
 2441550    49.5 N    048.2 E    5.7
                  0      81.6      16.5   03-12-19.5   02-59-58.
6   FCTSXZZGDL                                         29 WESTE
RN ASIA                      336 WESTERN KAZAKH SSR

 68 10195 F4 72  8 20 2441550 49.5 N  48.2 E 29 336  0.   0
  81.6     16.5  3 12 19.5  2 59 58.6 10195 F4     72/08/20
 2441550    49.5 N    048.2 E    5.7
                  0      81.6      16.5   03-12-19.5   02-59-58.
6   FCTSXZZGDL                                         29 WESTE
RN ASIA                      336 WESTERN KAZAKH SSR

 69 10197 BM 72  8 28 2441558 73.3 N  55.1 E 40 648  0.   0
  59.5      6.1  6 10  4.3  5 59 56.5 10197 BM     72/08/28
 2441558    73.3 N    055.1 E    6.3
                  0      59.5       6.1   06-10-04.3   05-59-56.
5   PBFRIJLFJX                                         40 ARCTI
C ZONE                       648 NOVAYA ZEMLYA

 69 10197 F1 72  8 28 2441558 73.3 N  55.1 E 40 648  0.   0
  59.5      6.1  6 10  4.3  5 59 56.5 10197 F1     72/08/28
 2441558    73.3 N    055.1 E    6.3
                  0      59.5       6.1   06-10-04.3   05-59-56.
5   PBFRIJLFJX                                         40 ARCTI
C ZONE                       648 NOVAYA ZEMLYA

 69 10197 F2 72  8 28 2441558 73.3 N  55.1 E 40 648  0.   0
  59.5      6.1  6 10  4.3  5 59 56.5 10197 F2     72/08/28
 2441558    73.3 N    055.1 E    6.3
                  0      59.5       6.1   06-10-04.3   05-59-56.
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5   PBFRIJLFJX                                           40 ARCTI
C ZONE                            648 NOVAYA ZEMLYA

 69 10197 F3 72  8 28 2441558 73.3 N  55.1 E 40 648  0.   0
  59.5      6.1  6 10  4.3  5 59 56.5 10197 F3     72/08/28
 2441558   73.3 N   055.1 F   6.3
                0     59.5      6.1   06-10-04.3   05-59-56.
5   PBFRIJLFJX                                           40 ARCTI
C ZONE                            648 NOVAYA ZEMLYA

 69 10197 F4 72  8 28 2441558 73.3 N  55.1 E 40 648  0.   0
  59.5      6.1  6 10  4.3  5 59 56.5 10197 F4     72/08/28
 2441558   73.3 N   055.1 E   6.3
                0     59.5      6.1   06-10-04.3   05-59-56.
5   PBFRIJLFJX                                           40 ARCTI
C ZONE                            648 NOVAYA ZEMLYA

 70 10199 BM 72  9  2 2441563 50.0 N  77.7 E 28 329  0.   0
  83.5    357.5  9  9 29.5  8 56 58.2 10199 BM     72/09/02
 2441563   50.0 N   077.7 F   5.1
                0     83.5    357.5   09-09-29.5   08-56-58.
2   SIVZXBOJLB                                           28 ALMA-
ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

 70 10199 F1 72  9  2 2441563 50.0 N  77.7 E 28 329  0.   0
  83.5    357.5  9  9 29.5  8 56 58.2 10199 F1     72/09/02
 2441563   50.0 N   077.7 F   5.1
                0     83.5    357.5   09-09-29.5   08-56-58.
2   SIVZXBOJLB                                           28 ALMA-
ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

 70 10199 F2 72  9  2 2441563 50.0 N  77.7 E 28 329  0.   0
  83.5    357.5  9  9 29.5  8 56 58.2 10199 F2     72/09/02
 2441563   50.0 N   077.7 E   5.1
                0     83.5    357.5   09-09-29.5   08-56-58.
2   SIVZXBOJLB                                           28 ALMA-
ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

 70 10199 F3 72  9  2 2441563 50.0 N  77.7 E 28 329  0.   0
  83.5    357.5  9  9 29.5  8 56 58.2 10199 F3     72/09/02
 2441563   50.0 N   077.7 F   5.1
                0     83.5    357.5   09-09-29.5   08-56-58.
2   SIVZXBOJLB                                           28 ALMA-
ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

 70 10199 F4 72  9  2 2441563 50.0 N  77.7 E 28 329  0.   0
  83.5    357.5  9  9 29.5  8 56 58.2 10199 F4     72/09/02
 2441563   50.0 N   077.7 E   5.1
                0     83.5    357.5   09-09-29.5   08-56-58.
2   SIVZXBOJLB                                           28 ALMA-
ATA TO LAKE BAIKAL                329 EASTERN KAZAKH SSR

 71 10201 BM 72  9  4 2441565 67.7 N  33.4 E 49 724  7.   7
  61.9     16.2  7 10 26.6  7  0  3.4 10201 BM     72/09/04
 2441565   67.7 N   033.4 F   4.6
                7     61.9     16.2   07-10-26.6   07-00-03.
4   LFBUCEXEFH                                           49 NORTH
ERN ASIA                          724 WESTERN RUSSIA

 71 10201 F1 72  9  4 2441565 67.7 N  33.4 E 49 724  7.   7
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  61.9      16.2  7 10 26.6  7  0  3.4 10201 F1      72/09/04
 2441565   67.7 N    033.4 E    4.6
                  7     61.9      16.2   07-10-26.6   07-00-03.
4   LFBUCEXEFH                                             49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 71 10201 F2 72  9  4 2441565 67.7 N  33.4 E 49 724  7.   7
  61.9      16.2  7 10 26.6  7  0  3.4 10201 F2      72/09/04
 2441565   67.7 N    033.4 E    4.6
                  7     61.9      16.2   07-10-26.6   07-00-03.
4   LFBUCEXEFH                                             49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 71 10201 F3 72  9  4 2441565 67.7 N  33.4 E 49 724  7.   7
  61.9      16.2  7 10 26.6  7  0  3.4 10201 F3      72/09/04
 2441565   67.7 N    033.4 E    4.6
                  7     61.9      16.2   07-10-26.6   07-00-03.
4   LFBUCEXEFH                                             49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 71 10201 F4 72  9  4 2441565 67.7 N  33.4 E 49 724  7.   7
  61.9      16.2  7 10 26.6  7  0  3.4 10201 F4      72/09/04
 2441565   67.7 N    033.4 E    4.6
                  7     61.9      16.2   07-10-26.6   07-00-03.
4   LFBUCEXEFH                                             49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 72 10613 BM 72  9 21 2441582 52.1 N  52.0 E 49 724 28.  28
  79.7      13.4  9 12  8.5  8 59 57.1 10613 BM      72/09/21
 2441582   52.1 N    052.0 E    5.1
                 28     79.7      13.4   09-12-08.5   08-59-57.
1   ZEMQLWVOUK                                             49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 72 10613 F1 72  9 21 2441582 52.1 N  52.0 E 49 724 28.  28
  79.7      13.4  9 12  8.5  8 59 57.1 10613 F1      72/09/21
 2441582   52.1 N    052.0 E    5.1
                 28     79.7      13.4   09-12-08.5   08-59-57.
1   ZEMQLWVOUK                                             49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 72 10613 F2 72  9 21 2441582 52.1 N  52.0 E 49 724 28.  28
  79.7      13.4  9 12  8.5  8 59 57.1 10613 F2      72/09/21
 2441582   52.1 N    052.0 E    5.1
                 28     79.7      13.4   09-12-08.5   08-59-57.
1   ZEMQLWVOUK                                             49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 72 10613 F3 72  9 21 2441582 52.1 N  52.0 E 49 724 28.  28
  79.7      13.4  9 12  8.5  8 59 57.1 10613 F3      72/09/21
 2441582   52.1 N    052.0 E    5.1
                 28     79.7      13.4   09-12-08.5   08-59-57.
1   ZEMQLWVOUK                                             49 NORTH
ERN ASIA                         724 WESTERN RUSSIA

 72 10613 F4 72  9 21 2441582 52.1 N  52.0 E 49 724 28.  28
  79.7      13.4  9 12  8.5  8 59 57.1 10613 F4      72/09/21
 2441582   52.1 N    052.0 E    5.1
                 28     79.7      13.4   09-12-08.5   08-59-57.
1   ZEMQLWVOUK                                             49 NORTH
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ERN ASIA                              724 WESTERN RUSSIA

  73 10618 BM 72 10   3 2441594 49.6 N   45.0 E 30 357  0.    0
   80.8      18.4   9 12 28.7   9   0 11.7 10618 BM      72/10/03
  2441594    49.6 N    045.0 E     5.8
                    0      80.8      18.4     09-12-28.7    09-00-11.
7    JWWLDFGFFX                                             30 MIDDL
F EAST - CRIMEA - BALKANS    357 SOUTHWESTERN RUSSIA

  73 10618 F1 72 10   3 2441594 49.6 N   45.0 E 30 357  0.    0
   80.8      18.4   9 12 28.7   9   0 11.7 10618 F1      72/10/03
  2441594    49.6 N    045.0 F     5.8
                    0      80.8      18.4     09-12-28.7    09-00-11.
7    JWWLDFGFFX                                             30 MIDDL
F EAST - CRIMEA - BALKANS    357 SOUTHWESTERN RUSSIA

  73 10618 F2 72 10   3 2441594 49.6 N   45.0 E 30 357  0.    0
   80.8      18.4   9 12 28.7   9   0 11.7 10618 F2      72/10/03
  2441594    49.6 N    045.0 E     5.8
                    0      80.8      18.4     09-12-28.7    09-00-11.
7    JWWLDFGFFX                                             30 MIDDL
F EAST - CRIMEA - BALKANS    357 SOUTHWESTERN RUSSIA

  73 10618 F3 72 10   3 2441594 49.6 N   45.0 E 30 357  0.    0
   80.8      18.4   9 12 28.7   9   0 11.7 10618 F3      72/10/03
  2441594    49.6 N    045.0 F     5.8
                    0      80.8      18.4     09-12-28.7    09-00-11.
7    JWWLDFGFFX                                             30 MIDDL
F EAST - CRIMEA - BALKANS    357 SOUTHWESTERN RUSSIA

  73 10618 F4 72 10   3 2441594 49.6 N   45.0 E 30 357  0.    0
   80.8      18.4   9 12 28.7   9   0 11.7 10618 F4      72/10/03
  2441594    49.6 N    045.0 E     5.8
                    0      80.8      18.4     09-12-28.7    09-00-11.
7    JWWLDFGFFX                                             30 MIDDL
E FAST - CRIMEA - BALKANS    357 SOUTHWESTERN RUSSIA

  74 10624 BM 72 11   2 2441624 49.9 N   78.8 E 28 329  0.    0
   83.6     356.7   1 39 29.5   1 26 57.9 10624 BM       72/11/02
  2441624    49.9 N    078.8 E     6.2
                    0      83.6     356.7     01-39-29.5    01-26-57.
9    LCDUWIFYFX                                             28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

  74 10624 F1 72 11   2 2441624 49.9 N   78.8 E 28 329  0.    0
   83.6     356.7   1 39 29.5   1 26 57.9 10624 F1       72/11/02
  2441624    49.9 N    078.8 E     6.2
                    0      83.6     356.7     01-39-29.5    01-26-57.
9    LCDUWIFYFX                                             28 ALMA-
ATA TO LAKE BAIKAL            329 FASTERN KAZAKH SSR

  74 10624 F2 72 11   2 2441624 49.9 N   78.8 E 28 329  0.    0
   83.6     356.7   1 39 29.5   1 26 57.9 10624 F2       72/11/02
  2441624    49.9 N    078.8 E     6.2
                    0      83.6     356.7     01-39-29.5    01-26-57.
9    LCDUWIFYFX                                             28 ALMA-
ATA TO LAKE BAIKAL            329 FASTERN KAZAKH SSR

  74 10624 F3 72 11   2 2441624 49.9 N   78.8 E 28 329  0.    0
   83.6     356.7   1 39 29.5   1 26 57.9 10624 F3       72/11/02
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 2441624    49.9 N    078.8 E    6.2
                 0     83.6     356.7   01-39-29.5   01-26-57.
9    LCDUWIFYFX                                        28 ALMA-
ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 74 10624 F4 72 11  2 2441624 49.9 N  78.8 E 28 329  0.   0
  83.6    356.7  1 39 29.5  1 26 57.9 10624 F4    72/11/02
 2441624    49.9 N    078.8 E    6.2
                 0     83.6     356.7   01-39-29.5   01-26-57.
9    LCDUWIFYFX                                        28 ALMA-
ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 75 10628 BM 72 11 24 2441646 52.8 N  51.1 E 49 724 33.  33
  78.9     13.8  9 12 10.4  9  0  3.8 10628 BM    72/11/24
 2441646    52.8 N    051.1 E    4.7
                33     78.9      13.8   09-12-10.4   09-00-03.
8    KGCLSURXCE                                        49 NORTH
ERN ASIA                        724 WESTERN RUSSIA

 75 10628 F1 72 11 24 2441646 52.8 N  51.1 E 49 724 33.  33
  78.9     13.8  9 12 10.4  9  0  3.8 10628 F1    72/11/24
 2441646    52.8 N    051.1 E    4.7
                33     78.9      13.8   09-12-10.4   09-00-03.
8    KGCLSURXCE                                        49 NORTH
ERN ASIA                        724 WESTERN RUSSIA

 75 10628 F2 72 11 24 2441646 52.8 N  51.1 E 49 724 33.  33
  78.9     13.8  9 12 10.4  9  0  3.8 10628 F2    72/11/24
 2441646    52.8 N    051.1 E    4.7
                33     78.9      13.8   09-12-10.4   09-00-03.
8    KGCLSURXCE                                        49 NORTH
ERN ASIA                        724 WESTERN RUSSIA

 75 10628 F3 72 11 24 2441646 52.8 N  51.1 E 49 724 33.  33
  78.9     13.8  9 12 10.4  9  0  3.8 10628 F3    72/11/24
 2441646    52.8 N    051.1 E    4.7
                33     78.9      13.8   09-12-10.4   09-00-03.
8    KGCLSURXCE                                        49 NORTH
ERN ASIA                        724 WESTERN RUSSIA

 75 10628 F4 72 11 24 2441646 52.8 N  51.1 E 49 724 33.  33
  78.9     13.8  9 12 10.4  9  0  3.8 10628 F4    72/11/24
 2441646    52.8 N    051.1 E    4.7
                33     78.9      13.8   09-12-10.4   09-00-03.
8    KGCLSURXCE                                        49 NORTH
ERN ASIA                        724 WESTERN RUSSIA


 76 10630 BM 72 11 24 2441646 51.8 N  64.1 E 29 336  0.   0
 81.4      6.0 10 12 18.4  9 59 58.2 10630 BM    72/11/24
2441646    51.8 N    064.1 E    5.2
                0     81.4       6.0   10-12-18.4   09-59-58.2
  BXJMLVHRHS                                          29 WESTER
N ASIA                         336 WESTERN KAZAKH SSR

 76 10630 F1 72 11 24 2441646 51.8 N  64.1 E 29 336  0.   0
  81.4      6.0 10 12 18.4  9 59 58.2 10630 F1    72/11/24
 2441646    51.8 N    064.1 E    5.2
                 0     81.4       6.0   10-12-18.4   09-59-58.
2    BXJMLVHRHS                                        29 WESTE
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RN ASIA                              336 WESTERN KAZAKH SSR

 76 10630 F2 72 11 24 2441646 51.8 N  64.1 E 29 336  0.   0
  81.4      6.0 10 12 18.4  9 59 58.2 10630 F2     72/11/24
 2441646    51.8 N    064.1 E    5.2
                    0      81.4        6.0    10-12-18.4    09-59-58.
2    BXJMLVHRHS                                              29 WESTF
RN ASIA                              336 WESTERN KAZAKH SSR

 76 10630 F3 72 11 24 2441646 51.8 N  64.1 E 29 336  0.   0
  81.4      6.0 10 12 18.4  9 59 58.2 10630 F3     72/11/24
 2441646    51.8 N    064.1 E    5.2
                    0      81.4        6.0    10-12-18.4    09-59-58.
2    BXJMLVHRHS                                              29 WESTF
RN ASIA                              336 WESTERN KAZAKH SSR

 76 10630 F4 72 11 24 2441646 51.8 N  64.1 E 29 336  0.   0
  81.4      6.0 10 12 18.4  9 59 58.2 10630 F4     72/11/24
 2441646    51.8 N    064.1 E    5.2
                    0      81.4        6.0    10-12-18.4    09-59-58.
2    BXJMLVHRHS                                              29 WESTF
RN ASIA                              336 WESTERN KAZAKH SSR

 77 10731 BM 72 12 10 2441662 50.0 N  78.0 E 28 329  0.   0
  83.5    357.3  4 39 30.1  4 26 58.9 10731 BM     72/12/10
 2441662    50.0 N    078.0 E    5.7
                    0      83.5      357.3    04-39-30.1    04-26-58.
9    GIDVPYLHFX                                              28 ALMA-
ATA TO LAKE BAIKAL                   329 EASTERN KAZAKH SSR

 77 10731 F1 72 12 10 2441662 50.0 N  78.0 E 28 329  0.   0
  83.5    357.3  4 39 30.1  4 26 58.9 10731 F1     72/12/10
 2441662    50.0 N    078.0 E    5.7
                    0      83.5      357.3    04-39-30.1    04-26-58.
9    GIDVPYLHFX                                              28 ALMA-
ATA TO LAKE BAIKAL                   329 EASTERN KAZAKH SSR

 77 10731 F2 72 12 10 2441662 50.0 N  78.0 E 28 329  0.   0
  83.5    357.3  4 39 30.1  4 26 58.9 10731 F2     72/12/10
 2441662    50.0 N    078.0 E    5.7
                    0      83.5      357.3    04-39-30.1    04-26-58.
9    GIDVPYLHFX                                              28 ALMA-
ATA TO LAKE BAIKAL                   329 EASTERN KAZAKH SSR

 77 10731 F3 72 12 10 2441662 50.0 N  78.0 E 28 329  0.   0
  83.5    357.3  4 39 30.1  4 26 58.9 10731 F3     72/12/10
 2441662    50.0 N    078.0 E    5.7
                    0      83.5      357.3    04-39-30.1    04-26-58.
9    GIDVPYLHFX                                              28 ALMA-
ATA TO LAKE BAIKAL                   329 EASTERN KAZAKH SSR

 77 10731 F4 72 12 10 2441662 50.0 N  78.0 E 28 329  0.   0
  83.5    357.3  4 39 30.1  4 26 58.9 10731 F4     72/12/10
 2441662    50.0 N    078.0 E    5.7
                    0      83.5      357.3    04-39-30.1    04-26-58.
9    GIDVPYLHFX                                              28 ALMA-
ATA TO LAKE BAIKAL                   329 EASTERN KAZAKH SSR

 78 10913 BM 73  4 19 2441792 49.8 N  78.2 E 28 329  0.   0
  83.7    357.1  4 33  0.0  4 20 27.7 10913 BM     73/04/19
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 2441792    49.8 N    078.2 E    5.4
                 0      83.7      357.1    04-33-00.0    04-20-27.
7    UMULEMUXZK                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 78 10913 F1 73  4 19 2441792 49.8 N  78.2 E 28 329  0.   0
  83.7    357.1  4 33  0.0  4 20 27.7 10913 F1    73/04/19
 2441792    49.8 N    078.2 E    5.4
                 0      83.7      357.1    04-33-00.0    04-20-27.
7    UMULEMUXZK                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 78 10913 F2 73  4 19 2441792 49.8 N  78.2 E 28 329  0.   0
  83.7    357.1  4 33  0.0  4 20 27.7 10913 F2    73/04/19
 2441792    49.8 N    078.2 E    5.4
                 0      83.7      357.1    04-33-00.0    04-20-27.
7    UMULEMUXZK                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 78 10913 F3 73  4 19 2441792 49.8 N  78.2 E 28 329  0.   0
  83.7    357.1  4 33  0.0  4 20 27.7 10913 F3    73/04/19
 2441792    49.8 N    078.2 E    5.4
                 0      83.7      357.1    04-33-00.0    04-20-27.
7    UMULEMUXZK                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 78 10913 F4 73  4 19 2441792 49.8 N  78.2 E 28 329  0.   0
  83.7    357.1  4 33  0.0  4 20 27.7 10913 F4    73/04/19
 2441792    49.8 N    078.2 E    5.4
                 0      83.7      357.1    04-33-00.0    04-20-27.
7    UMULEMUXZK                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 79 11048 BM 73  7 10 2441874 49.8 N  78.1 E 28 329  0.   0
  83.7    357.2  1 26 57.0  1 14 24.7 11048 BM    73/07/10
 2441874    49.8 N    078.1 E    5.4
                 0      83.7      357.2    01-26-57.0    01-14-24.
7    TPSYXLZIEV                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 79 11048 F1 73  7 10 2441874 49.8 N  78.1 E 28 329  0.   0
  83.7    357.2  1 26 57.0  1 14 24.7 11048 F1    73/07/10
 2441874    49.8 N    078.1 E    5.4
                 0      83.7      357.2    01-26-57.0    01-14-24.
7    TPSYXLZIEV                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 79 11048 F2 73  7 10 2441874 49.8 N  78.1 E 28 329  0.   0
  83.7    357.2  1 26 57.0  1 14 24.7 11048 F2    73/07/10
 2441874    49.8 N    078.1 E    5.4
                 0      83.7      357.2    01-26-57.0    01-14-24.
7    TPSYXLZIEV                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 79 11048 F3 73  7 10 2441874 49.8 N  78.1 E 28 329  0.   0
  83.7    357.2  1 26 57.0  1 14 24.7 11048 F3    73/07/10
 2441874    49.8 N    078.1 E    5.4
                 0      83.7      357.2    01-26-57.0    01-14-24.
7    TPSYXLZIEV                                            28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR
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 79 11048 F4 73  7 10 2441874 49.8 N  78.1 E 28 329  0.   0
  83.7   357.2  1 26 57.0  1 14 24.7 11048 F4    73/07/10
 2441874   49.8 N   078.1 E   5.4
                0     83.7    357.2   01-26-57.0   01-14-24.
7   TPSYXLZIEV                                       28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 80 11069 BM 73  7 23 2441887 50.0 N  78.9 E 28 329  0.   0
  83.5   356.7  1 22 57.0  1 10 26.0 11069 BM    73/07/23
 2441887   50.0 N   078.9 E   6.3
                0     83.5    356.7   01-22-57.0   01-10-26.
0   ULIHMISOXR                                       28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 80 11069 F1 73  7 23 2441887 50.0 N  78.9 E 28 329  0.   0
  83.5   356.7  1 22 57.0  1 10 26.0 11069 F1    73/07/23
 2441887   50.0 N   078.9 E   6.3
                0     83.5    356.7   01-22-57.0   01-10-26.
0   ULIHMISOXR                                       28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 80 11069 F2 73  7 23 2441887 50.0 N  78.9 E 28 329  0.   0
  83.5   356.7  1 22 57.0  1 10 26.0 11069 F2    73/07/23
 2441887   50.0 N   078.9 E   6.3
                0     83.5    356.7   01-22-57.0   01-10-26.
0   ULIHMISOXR                                       28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 80 11069 F3 73  7 23 2441887 50.0 N  78.9 E 28 329  0.   0
  83.5   356.7  1 22 57.0  1 10 26.0 11069 F3    73/07/23
 2441887   50.0 N   078.9 E   6.3
                0     83.5    356.7   01-22-57.0   01-10-26.
0   ULIHMISOXR                                       28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 80 11069 F4 73  7 23 2441887 50.0 N  78.9 E 28 329  0.   0
  83.5   356.7  1 22 57.0  1 10 26.0 11069 F4    73/07/23
 2441887   50.0 N   078.9 E   6.3
                0     83.5    356.7   01-22-57.0   01-10-26.
0   ULIHMISOXR                                       28 ALMA-
ATA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

 81 11432 BM 73  8 15 2441910 42.7 N  67.4 E 48 713  0.   0
  90.7     4.7  1 59 57.0  1 46 51.1 11432 BM    73/08/15
 2441910   42.7 N   067.4 E   5.3
                0     90.7      4.7   01-59-57.0   01-46-51.
1   XLGDIDBMIZ                                       48 HINDU
 KUSH AND PAMIR               713 CENTRAL KAZAKH SSR

 81 11432 F1 73  8 15 2441910 42.7 N  67.4 E 48 713  0.   0
  90.7     4.7  1 59 57.0  1 46 51.1 11432 F1    73/08/15
 2441910   42.7 N   067.4 E   5.3
                0     90.7      4.7   01-59-57.0   01-46-51.
1   XLGDIDBMIZ                                       48 HINDU
 KUSH AND PAMIR               713 CENTRAL KAZAKH SSR

 81 11432 F2 73  8 15 2441910 42.7 N  67.4 E 48 713  0.   0
  90.7     4.7  1 59 57.0  1 46 51.1 11432 F2    73/08/15
 2441910   42.7 N   067.4 E   5.3
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                  0     90.7       4.7   01-59-57.0   01-46-51.
 1   XLGDIDBMIZ                                          48 HINDU
 KUSH AND PAMIR                713 CENTRAL KAZAKH SSR

 81 11432 F3 73  8 15 2441910 42.7 N  67.4 E 48 713  0.   0
  90.7      4.7  1 59 57.0  1 46 51.1 11432 F3    73/08/15
 2441910    42.7 N   067.4 E    5.3
                  0     90.7       4.7   01-59-57.0   01-46-51.
 1   XLGDIDBMIZ                                          48 HINDU
 KUSH AND PAMIR                713 CENTRAL KAZAKH SSR

 81 11432 F4 73  8 15 2441910 42.7 N  67.4 E 48 713  0.   0
  90.7      4.7  1 59 57.0  1 46 51.1 11432 F4    73/08/15
 2441910    42.7 N   067.4 E    5.3
                  0     90.7       4.7   01-59-57.0   01-46-51.
 1   XLGDIDBMIZ                                          48 HINDU
 KUSH AND PAMIR                713 CENTRAL KAZAKH SSR

 82 11473 BM 73  8 28 2441923 50.6 N  68.4 E 48 713  0.   0
  82.9      3.4  2 59 58.0  2 47 30.6 11473 BM    73/08/28
 2441923    50.6 N   068.4 E    5.3
                  0     82.9       3.4   02-59-58.0   02-47-30.
 6   EWUYDJXMLW                                          48 HINDU
 KUSH AND PAMIR                713 CENTRAL KAZAKH SSR

 82 11473 F1 73  8 28 2441923 50.6 N  68.4 E 48 713  0.   0
  82.9      3.4  2 59 58.0  2 47 30.6 11473 F1    73/08/28
 2441923    50.6 N   068.4 E    5.3
                  0     82.9       3.4   02-59-58.0   02-47-30.
 6   EWUYDJXMLW                                          48 HINDU
 KUSH AND PAMIR                713 CENTRAL KAZAKH SSR

 82 11473 F2 73  8 28 2441923 50.6 N  68.4 E 48 713  0.   0
  82.9      3.4  2 59 58.0  2 47 30.6 11473 F2    73/08/28
 2441923    50.6 N   068.4 E    5.3
                  0     82.9       3.4   02-59-58.0   02-47-30.
 6   EWUYDJXMLW                                          48 HINDU
 KUSH AND PAMIR                713 CENTRAL KAZAKH SSR

 82 11473 F3 73  8 28 2441923 50.6 N  68.4 E 48 713  0.   0
  82.9      3.4  2 59 58.0  2 47 30.6 11473 F3    73/08/28
 2441923    50.6 N   068.4 E    5.3
                  0     82.9       3.4   02-59-58.0   02-47-30.
 6   EWUYDJXMLW                                          48 HINDU
 KUSH AND PAMIR                713 CENTRAL KAZAKH SSR

 82 11473 F4 73  8 28 2441923 50.6 N  68.4 E 48 713  0.   0
  82.9      3.4  2 59 58.0  2 47 30.6 11473 F4    73/08/28
 2441923    50.6 N   068.4 E    5.3
                  0     82.9       3.4   02-59-58.0   02-47-30.
 6   EWUYDJXMLW                                          48 HINDU
 KUSH AND PAMIR                713 CENTRAL KAZAKH SSR

 83 11535 BM 73  9 12 2441938 73.3 N  55.2 E 40 648  0.   0
  59.6      6.1  6 59 57.0  6 49 49.1 11535 BM    73/09/12
 2441938    73.3 N   055.2 E    6.8
                  0     59.6       6.1   06-59-57.0   06-49-49.
 1   MSXMYHGLJI                                          40 ARCTI
 C ZONE                        648 NOVAYA ZEMLYA
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 83 11535 F1 73  9 12 2441938 73.3 N  55.2 E 40 648  0.   0
  59.6     6.1  6 59 57.0  6 49 49.1 11535 F1    73/09/12
 2441938    73.3 N   055.2 E   6.8
                 0     59.6       6.1   06-59-57.0   06-49-49.
1   MSXMYHGLJI                                         40 ARCTI
C ZONE                           648 NOVAYA ZEMLYA

 83 11535 F2 73  9 12 2441938 73.3 N  55.2 E 40 648  0.   0
  59.6     6.1  6 59 57.0  6 49 49.1 11535 F2    73/09/12
 2441938    73.3 N   055.2 E   6.8
                 0     59.6       6.1   06-59-57.0   06-49-49.
1   MSXMYHGLJI                                         40 ARCTI
C ZONE                           648 NOVAYA ZEMLYA

 83 11535 F3 73  9 12 2441938 73.3 N  55.2 E 40 648  0.   0
  59.6     6.1  6 59 57.0  6 49 49.1 11535 F3    73/09/12
 2441938    73.3 N   055.2 E   6.8
                 0     59.6       6.1   06-59-57.0   06-49-49.
1   MSXMYHGLJI                                         40 ARCTI
C ZONE                           648 NOVAYA ZEMLYA

 83 11535 F4 73  9 12 2441938 73.3 N  55.2 E 40 648  0.   0
  59.6     6.1  6 59 57.0  6 49 49.1 11535 F4    73/09/12
 2441938    73.3 N   055.2 E   6.8
                 0     59.6       6.1   06-59-57.0   06-49-49.
1   MSXMYHGLJI                                         40 ARCTI
C ZONE                           648 NOVAYA ZEMLYA

 84 11542 8M 73  9 19 2441945 45.6 N  67.9 E 48 713  0.   0
  87.9     4.1  2 59 57.0  2 47  4.7 11542 8M    73/09/19
 2441945    45.6 N   067.9 E   5.2
                 0     87.9       4.1   02-59-57.0   02-47-04.
7   TLMGXSDZWH                                         48 HINDU
 KUSH AND PAMIR                  713 CENTRAL KAZAKH SSR

 84 11542 F1 73  9 19 2441945 45.6 N  67.9 E 48 713  0.   0
  87.9     4.1  2 59 57.0  2 47  4.7 11542 F1    73/09/19
 2441945    45.6 N   067.9 E   5.2
                 0     87.9       4.1   02-59-57.0   02-47-04.
7   TLMGXSDZWH                                         48 HINDU
 KUSH AND PAMIR                  713 CENTRAL KAZAKH SSR

 84 11542 F2 73  9 19 2441945 45.6 N  67.9 E 48 713  0.   0
  87.9     4.1  2 59 57.0  2 47  4.7 11542 F2    73/09/19
 2441945    45.6 N   067.9 E   5.2
                 0     87.9       4.1   02-59-57.0   02-47-04.
7   TLMGXSDZWH                                         48 HINDU
 KUSH AND PAMIR                  713 CENTRAL KAZAKH SSR

 84 11542 F2 73  9 19 2441945 45.6 N  67.9 E 48 713  0.   0
  87.9     4.1  2 59 57.0  2 47  4.7 11542 F2    73/09/19
 2441945    45.6 N   067.9 E   5.2
                 0     87.9       4.1   02-59-57.0   02-47-04.
7   TLMGXSDZWH                                         48 HINDU
 KUSH AND PAMIR                  713 CENTRAL KAZAKH SSR

 84 11542 F3 73  9 19 2441945 45.6 N  67.9 E 48 713  0.   0
  87.9     4.1  2 59 57.0  2 47  4.7 11542 F3    73/09/19
 2441945    45.6 N   067.9 E   5.2
                 0     87.9       4.1   02-59-57.0   02-47-04.
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7    TLMGXSDZWH                                          48 HINDU
 KUSH AND PAMIR                      713 CENTRAL KAZAKH SSR

 85 11585 BM 73  9 27 2441953 70.8 N  53.9 E 40 648  0.   0
  61.9       7.3  6 59 58.0  6 49 34.8 11585 BM     73/09/27
 2441953   70.8 N   053.9 E   6.0
                  0     61.9       7.3    06-59-58.0    06-49-34.
8    XBVUBJLVUB                                          40 ARCTI
C ZONE                               648 NOVAYA ZEMLYA

 85 11585 F1 73  9 27 2441953 70.8 N  53.9 E 40 648  0.   0
  61.9       7.3  6 59 58.0  6 49 34.8 11585 F1     73/09/27
 2441953   70.8 N   053.9 E   6.0
                  0     61.9       7.3    06-59-58.0    06-49-34.
8    XBVUBJLVUB                                          40 ARCTI
C ZONE                               648 NOVAYA ZEMLYA

 85 11585 F2 73  9 27 2441953 70.8 N  53.9 E 40 648  0.   0
  61.9       7.3  6 59 58.0  6 49 34.8 11585 F2     73/09/27
 2441953   70.8 N   053.9 E   6.0
                  0     61.9       7.3    06-59-58.0    06-49-34.
8    XBVUBJLVUB                                          40 ARCTI
C ZONE                               648 NOVAYA ZEMLYA

 85 11585 F3 73  9 27 2441953 70.8 N  53.9 E 40 648  0.   0
  61.9       7.3  6 59 58.0  6 49 34.8 11585 F3     73/09/27
 2441953   70.8 N   053.9 E   6.0
                  0     61.9       7.3    06-59-58.0    06-49-34.
8    XBVUBJLVUB                                          40 ARCTI
C ZONE                               648 NOVAYA ZEMLYA

 85 11585 F4 73  9 27 2441953 70.8 N  53.9 E 40 648  0.   0
  61.9       7.3  6 59 58.0  6 49 34.8 11585 F4     73/09/27
 2441953   70.8 N   053.9 E   6.0
                  0     61.9       7.3    06-59-58.0    06-49-34.
8    XBVUBJLVUB                                          40 ARCTI
C ZONE                               648 NOVAYA ZEMLYA

 86 11589 BM 73  9 30 2441956 51.6 N  54.6 E 49 724  0.   0
  80.6      11.9  4 59  0.0  4 46 43.9 11589 BM     73/09/30
 2441956   51.6 N   054.6 E   5.2
                  0     80.6      11.9    04-59-00.0    04-46-43.
9    JMXUZHGPLI                                          49 NORTH
ERN ASIA                             724 WESTERN RUSSIA

 86 11589 F1 73  9 30 2441956 51.6 N  54.6 E 49 724  0.   0
  80.6      11.9  4 59  0.0  4 46 43.9 11589 F1     73/09/30
 2441956   51.6 N   054.6 E   5.2
                  0     80.6      11.9    04-59-00.0    04-46-43.
9    JMXUZHGPLI                                          49 NORTH
ERN ASIA                             724 WESTERN RUSSIA

 86 11589 F2 73  9 30 2441956 51.6 N  54.6 E 49 724  0.   0
  80.6      11.9  4 59  0.0  4 46 43.9 11589 F2     73/09/30
 2441956   51.6 N   054.6 E   5.2
                  0     80.6      11.9    04-59-00.0    04-46-43.
9    JMXUZHGPLI                                          49 NORTH
ERN ASIA                             724 WESTERN RUSSIA

 86 11589 F3 73  9 30 2441956 51.6 N  54.6 E 49 724  0.   0
```

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  80.6      11.9  4 59  0.0  4 46 43.9 11589 F3     73/09/30
 2441956    51.6 N    054.6 E    5.2
                 0     80.6      11.9   04-59-00.0   04-46-43.
9   JMXUZHGPLI                                         49 NORTH
ERN ASIA                        724 WESTERN RUSSIA

 86 11589 F4 73  9 30 2441956 51.6 N  54.6 E 49 724  0.    0
  80.6      11.9  4 59  0.0  4 46 43.9 11589 F4     73/09/30
 2441956    51.6 N    054.6 E    5.2
                 0     80.6      11.9   04-59-00.0   04-46-43.
9   JMXUZHGPLI                                         49 NORTH
ERN ASIA                        724 WESTERN RUSSIA

 87 11662 BM 73 10 26 2441982 53.7 N  55.4 E 29 335  0.    0
  78.7      11.0  5 59 57.0  5 47 51.6 11662 BM     73/10/26
 2441982    53.7 N    055.4 E    4.8
                 0     78.7      11.0   05-59-57.0   05-47-51.
6   LZJXPFGUMF                                         29 WESTE
RN ASIA                         335 URAL MOUNTAINS REGION

 87 11662 D1 73 10 26 2441982 53.7 N  55.4 E 29 335  0.    0
  78.7      11.0  5 59 57.0  5 47 51.6 11662 D1     73/10/26
 2441982    53.7 N    055.4 E    4.8
                 0     78.7      11.0   05-59-57.0   05-47-51.
6   LZJXPFGUMF                                         29 WESTE
RN ASIA                         335 URAL MOUNTAINS REGION

 87 11662 D2 73 10 26 2441982 53.7 N  55.4 E 29 335  0.    0
  78.7      11.0  5 59 57.0  5 47 51.6 11662 D2     73/10/26
 2441982    53.7 N    055.4 E    4.8
                 0     78.7      11.0   05-59-57.0   05-47-51.
6   LZJXPFGUMF                                         29 WESTE
RN ASIA                         335 URAL MOUNTAINS REGION

 87 11662 D3 73 10 26 2441982 53.7 N  55.4 E 29 335  0.    0
  78.7      11.0  5 59 57.0  5 47 51.6 11662 D3     73/10/26
 2441982    53.7 N    055.4 E    4.8
                 0     78.7      11.0   05-59-57.0   05-47-51.
6   LZJXPFGUMF                                         29 WESTE
RN ASIA                         335 URAL MOUNTAINS REGION

 87 11662 D4 73 10 26 2441982 53.7 N  55.4 E 29 335  0.    0
  78.7      11.0  5 59 57.0  5 47 51.6 11662 D4     73/10/26
 2441982    53.7 N    055.4 E    4.8
                 0     78.7      11.0   05-59-57.0   05-47-51.
6   LZJXPFGUMF                                         29 WESTE
RN ASIA                         335 URAL MOUNTAINS REGION

 88 11707 BM 73 10 27 2441983 70.8 N  54.2 E 40 648  0.    0
  61.9       7.2  6 59 57.0  6 49 33.6 11707 BM     73/10/27
 2441983    70.8 N    054.2 E    6.9
                 0     61.9       7.2   06-59-57.0   06-49-33.
6   WMMSCULDYZ                                         40 ARCTI
C ZONE                          648 NOVAYA ZEMLYA

 88 11707 D1 73 10 27 2441983 70.8 N  54.2 E 40 648  0.    0
  61.9       7.2  6 59 57.0  6 49 33.6 11707 D1     73/10/27
 2441983    70.8 N    054.2 E    6.9
                 0     61.9       7.2   06-59-57.0   06-49-33.
6   WMMSCULDYZ                                         40 ARCTI
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C ZONE                          648 NOVAYA ZEMLYA

 88 11707 D2 73 10 27 2441983 70.8 N  54.2 E 40 648  0.   0
  61.9      7.2  6 59 57.0  6 49 33.6 11707 D2    73/10/27
 2441983   70.8 N   054.2 E   6.9
                 0     61.9      7.2   06-59-57.0   06-49-33.
6   WMMSCULDXZ                                          40 ARCTI
C ZONE                          648 NOVAYA ZEMLYA

 88 11707 D3 73 10 27 2441983 70.8 N  54.2 E 40 648  0.   0
  61.9      7.2  6 59 57.0  6 49 33.6 11707 D3    73/10/27
 2441983   70.8 N   054.2 E   6.9
                 0     61.9      7.2   06-59-57.0   06-49-33.
6   WMMSCULDXZ                                          40 ARCTI
C ZONE                          648 NOVAYA ZEMLYA

 88 11707 D4 73 10 27 2441983 70.8 N  54.2 E 40 648  0.   0
  61.9      7.2  6 59 57.0  6 49 33.6 11707 D4    73/10/27
 2441983   70.8 N   054.2 E   6.9
                 0     61.9      7.2   06-59-57.0   06-49-33.
6   WMMSCULDXZ                                          40 ARCTI
C ZONE                          648 NOVAYA ZEMLYA

 89 11785 BM 73 12 14 2442031 50.0 N  79.0 E 28 329  0.   0
  83.5    356.6  7 46 47.0  7 34 16.0 11785 BM    73/12/14
 2442031   50.0 N   079.0 E   6.0
                 0     83.5    356.6   07-46-47.0   07-34-16.
0   WUDYLBXEST                                          28 ALMA-
ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 89 11785 D1 73 12 14 2442031 50.0 N  79.0 E 28 329  0.   0
  83.5    356.6  7 46 47.0  7 34 16.0 11785 D1    73/12/14
 2442031   50.0 N   079.0 E   6.0
                 0     83.5    356.6   07-46-47.0   07-34-16.
0   WUDYLBXEST                                          28 ALMA-
ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 89 11785 D2 73 12 14 2442031 50.0 N  79.0 E 28 329  0.   0
  83.5    356.6  7 46 47.0  7 34 16.0 11785 D2    73/12/14
 2442031   50.0 N   079.0 E   6.0
                 0     83.5    356.6   07-46-47.0   07-34-16.
0   WUDYLBXEST                                          28 ALMA-
ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 89 11785 D3 73 12 14 2442031 50.0 N  79.0 E 28 329  0.   0
  83.5    356.6  7 46 47.0  7 34 16.0 11785 D3    73/12/14
 2442031   50.0 N   079.0 E   6.0
                 0     83.5    356.6   07-46-47.0   07-34-16.
0   WUDYLBXEST                                          28 ALMA-
ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 89 11785 D4 73 12 14 2442031 50.0 N  79.0 E 28 329  0.   0
  83.5    356.6  7 46 47.0  7 34 16.0 11785 D4    73/12/14
 2442031   50.0 N   079.0 E   6.0
                 0     83.5    356.6   07-46-47.0   07-34-16.
0   WUDYLBXEST                                          28 ALMA-
ATA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

 90  1045 BM 65 10  1 2439035 51.2 N 178.9 E  1   6 36.  36
  47.4    304.5 13 23   1.7 13 14 23.7  1045 BM    65/10/01
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 2439035    51.2 N    178.9 E     4.8
                  36      47.4      304.5    13-23-01.7    13-14-23.
7    UUEQFZRJKL                                               1 ALASK
A - ALEUTIAN ARC                      6 RAT ISLANDS, ALEUTIAN ISLAND
S
 90  1045 F1 65 10  1 2439035 51.2 N 178.9 E  1    6 36.  36
  47.4    304.5 13 23   1.7 13 14 23.7  1045 F1     65/10/01
 2439035    51.2 N    178.9 E     4.8
                  36      47.4      304.5    13-23-01.7    13-14-23.
7    UUEQFZRJKL                                               1 ALASK
A - ALEUTIAN ARC                      6 RAT ISLANDS, ALEUTIAN ISLAND
S
 90  1045 F2 65 10  1 2439035 51.2 N 178.9 E  1    6 36.  36
  47.4    304.5 13 23   1.7 13 14 23.7  1045 F2     65/10/01
 2439035    51.2 N    178.9 E     4.8
                  36      47.4      304.5    13-23-01.7    13-14-23.
7    UUFQFZRJKL                                               1 ALASK
A - ALEUTIAN ARC                      6 RAT ISLANDS, ALEUTIAN ISLAND
S
 90  1045 F3 65 10  1 2439035 51.2 N 178.9 E  1    6 36.  36
  47.4    304.5 13 23   1.7 13 14 23.7  1045 F3     65/10/01
 2439035    51.2 N    178.9 E     4.8
                  36      47.4      304.5    13-23-01.7    13-14-23.
7    UOEQFZRJKL                                               1 ALASK
A - ALEUTIAN ARC                      6 RAT ISLANDS, ALEUTIAN ISLAND
S
 90  1045 F4 65 10  1 2439035 51.2 N 178.9 E  1    6 36.  36
  47.4    304.5 13 23   1.7 13 14 23.7  1045 F4     65/10/01
 2439035    51.2 N    178.9 E     4.8
                  36      47.4      304.5    13-23-01.7    13-14-23.
7    UUEQFZRJKL                                               1 ALASK
A - ALEUTIAN ARC                      6 RAT ISLANDS, ALEUTIAN ISLAND
S
 91  1052 BM 65 11 11 2439076 51.3 N 174.0 E  1    5 45.  45
  50.1    306.5  2 30    .2  2 21  1.5  1052 BM     65/11/11
 2439076    51.3 N    174.0 E     5.2
                  45      50.1      306.5    02-30-00.2    02-21-01.
5    TLIPEFQIDS                                               1 ALASK
A - ALEUTIAN ARC                      5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
 91  1052 F1 65 11 11 2439076 51.3 N 174.0 E  1    5 45.  45
  50.1    306.5  2 30    .2  2 21  1.5  1052 F1     65/11/11
 2439076    51.3 N    174.0 E     5.2
                  45      50.1      306.5    02-30-00.2    02-21-01.
5    TLIPEFQIDS                                               1 ALASK
A - ALEUTIAN ARC                      5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
 91  1052 F2 65 11 11 2439076 51.3 N 174.0 E  1    5 45.  45
  50.1    306.5  2 30    .2  2 21  1.5  1052 F2     65/11/11
 2439076    51.3 N    174.0 E     5.2
                  45      50.1      306.5    02-30-00.2    02-21-01.
5    TLIPEFQIDS                                               1 ALASK
A - ALEUTIAN ARC                      5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
 91  1052 F3 65 11 11 2439076 51.3 N 174.0 E  1    5 45.  45
  50.1    306.5  2 30    .2  2 21  1.5  1052 F3     65/11/11
 2439076    51.3 N    174.0 E     5.2
                  45      50.1      306.5    02-30-00.2    02-21-01.
5    TLIPEFQIDS                                               1 ALASK
A - ALEUTIAN ARC                      5 NEAR ISLANDS, ALEUTIAN ISLAN
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DS
 91  1052 F4 65 11 11 2439076 51.3 N 174.0 E  1    5 45.  45
  50.1   306.5  2 30   .2  2 21  1.5  1052 F4    65/11/11
 2439076   51.3 N   174.0 F   5.2
             45    50.1    306.5   02-30-00.2   02-21-01.
5   TLIPEFQIDS                                      1 ALASK
A - ALEUTIAN ARC              5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
 92  1056 BM 65 11 13 2439078 43.8 N  87.7 E 28 332 55.  55
  89.0   350.0  4 46 43.3  4 33 45.5  1056 BM    65/11/13
 2439078   43.8 N   087.7 E   6.4
             55    89.0    350.0   04-46-43.3   04-33-45.
5   CFHDOVJLOQ                                      28 ALMA-
ATA TO LAKE BAIKAL          332 NORTHERN SINKIANG PROV., CHI
NA
 92  1056 F1 65 11 13 2439078 43.8 N  87.7 E 28 332 55.  55
  89.0   350.0  4 46 43.3  4 33 45.5  1056 F1    65/11/13
 2439078   43.8 N   087.7 F   6.4
             55    89.0    350.0   04-46-43.3   04-33-45.
5   CFHDOVJLOQ                                      28 ALMA-
ATA TO LAKE BAIKAL          332 NORTHERN SINKIANG PROV., CHI
NA
 92  1056 F2 65 11 13 2439078 43.8 N  87.7 E 28 332 55.  55
  89.0   350.0  4 46 43.3  4 33 45.5  1056 F2    65/11/13
 2439078   43.8 N   087.7 E   6.4
             55    89.0    350.0   04-46-43.3   04-33-45.
5   CFHDOVJLOQ                                      28 ALMA-
ATA TO LAKE BAIKAL          332 NORTHERN SINKIANG PROV., CHI
NA
 92  1056 F3 65 11 13 2439078 43.8 N  87.7 E 28 332 55.  55
  89.0   350.0  4 46 43.3  4 33 45.5  1056 F3    65/11/13
 2439078   43.8 N   087.7 E   6.4
             55    89.0    350.0   04-46-43.3   04-33-45.
5   CFHDOVJLOQ                                      28 ALMA-
ATA TO LAKE BAIKAL          332 NORTHERN SINKIANG PROV., CHI
NA
 92  1056 F4 65 11 13 2439078 43.8 N  87.7 E 28 332 55.  55
  89.0   350.0  4 46 43.3  4 33 45.5  1056 F4    65/11/13
 2439078   43.8 N   087.7 F   6.4
             55    89.0    350.0   04-46-43.3   04-33-45.
5   CFHDOVJLOQ                                      28 ALMA-
ATA TO LAKE BAIKAL          332 NORTHERN SINKIANG PROV., CHI
NA
 93  1901 BM 66  1 28 2439154 39.3 N  73.1 E 48 719 43.  43
  94.3       .5  9   5 21.3  8 51 58.8  1901 BM    66/01/28
 2439154   39.3 N   073.1 F   5.3
             43    94.3        .5   09-05-21.3   08-51-58.
8   QBOLTKJKWF                                      48 HINDU
 KUSH AND PAMIR             719 TADZHIK-SINKIANG BORDER REGI
ON
 93  1901 F1 66  1 28 2439154 39.3 N  73.1 E 48 719 43.  43
  94.3       .5  9   5 21.3  8 51 58.8  1901 F1    66/01/28
 2439154   39.3 N   073.1 F   5.3
             43    94.3        .5   09-05-21.3   08-51-58.
8   QBOLTKJKWF                                      48 HINDU
 KUSH AND PAMIR             719 TADZHIK-SINKIANG BORDER REGI
ON
 93  1901 F2 66  1 28 2439154 39.3 N  73.1 E 48 719 43.  43
  94.3       .5  9   5 21.3  8 51 58.8  1901 F2    66/01/28
 2439154   39.3 N   073.1 F   5.3
```

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                      43     94.3         .5   09-05-21.3   08-51-58.
  8    QBOLTKJKWF                                            48 HINDU
  KUSH AND PAMIR              719 TADZHIK-SINKIANG BORDER REGI
 ON
  93  1901 F3 66  1 28 2439154 39.3 N  73.1 E 48 719 43.  43
   94.3       .5  9  5 21.3  8 51 58.8  1901 F3    66/01/28
  2439154   39.3 N   073.1 E   5.3
                      43     94.3         .5   09-05-21.3   08-51-58.
  8    QBOLTKJKWF                                            48 HINDU
  KUSH AND PAMIR              719 TADZHIK-SINKIANG BORDER REGI
 ON
  93  1901 F4 66  1 28 2439154 39.3 N  73.1 E 48 719 43.  43
   94.3       .5  9  5 21.3  8 51 58.8  1901 F4    66/01/28
  2439154   39.3 N   073.1 E   5.3
                      43     94.3         .5   09-05-21.3   08-51-58.
  8    QBOLTKJKWF                                            48 HINDU
  KUSH AND PAMIR              719 TADZHIK-SINKIANG BORDER REGI
 ON
  94  2194 BM 66  2  7 2439164 29.8 N  69.7 E 47 710 33.  33
  103.7      3.6  4 40 13.9  4 26  9.1  2194 BM    66/02/07
  2439164   29.8 N   069.7 E   6.0
                      33    103.7        3.6   04-40-13.9   04-26-09.
  1    TLMSPUQVMY                                            47 BALUC
 HISTAN                       710 WEST PAKISTAN

  94  2194 F1 66  2  7 2439164 29.8 N  69.7 E 47 710 33.  33
  103.7      3.6  4 40 13.9  4 26  9.1  2194 F1    66/02/07
  2439164   29.8 N   069.7 E   6.0
                      33    103.7        3.6   04-40-13.9   04-26-09.
  1    TLMSPUQVMY                                            47 BALUC
 HISTAN                       710 WEST PAKISTAN

  94  2194 F2 66  2  7 2439164 29.8 N  69.7 E 47 710 33.  33
  103.7      3.6  4 40 13.9  4 26  9.1  2194 F2    66/02/07
  2439164   29.8 N   069.7 E   6.0
                      33    103.7        3.6   04-40-13.9   04-26-09.
  1    TLMSPUQVMY                                            47 BALUC
 HISTAN                       710 WEST PAKISTAN

  94  2194 F3 66  2  7 2439164 29.8 N  69.7 E 47 710 33.  33
  103.7      3.6  4 40 13.9  4 26  9.1  2194 F3    66/02/07
  2439164   29.8 N   069.7 E   6.0
                      33    103.7        3.6   04-40-13.9   04-26-09.
  1    TLMSPUQVMY                                            47 BALUC
 HISTAN                       710 WEST PAKISTAN

  94  2194 F4 66  2  7 2439164 29.8 N  69.7 E 47 710 33.  33
  103.7      3.6  4 40 13.9  4 26  9.1  2194 F4    66/02/07
  2439164   29.8 N   069.7 E   6.0
                      33    103.7        3.6   04-40-13.9   04-26-09.
  1    TLMSPUQVMY                                            47 BALUC
 HISTAN                       710 WEST PAKISTAN

  95  2805 BM 66  5 20 2439266 13.9 N 146.1 E 17 210 66.  66
   91.7    292.3  9 27 50.9  9 14 40.2  2805 BM    66/05/20
  2439266   13.9 N   146.1 E   6.0
                      66     91.7      292.3   09-27-50.9   09-14-40.
  2    FRFEGUGLTU                                            17 CAROL
 INE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS
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 95  2805 F1 66  5 20 2439266 13.9 N 146.1 E 17 210 66.  66
  91.7    292.3   9 27 50.9   9 14 40.2  2805 F1     66/05/20
 2439266    13.9 N    146.1 E    6.0
                  66      91.7      292.3    09-27-50.9    09-14-40.
2   FRFEGUGLIU                                           17 CAROL
INE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS

 95  2805 F2 66  5 20 2439266 13.9 N 146.1 E 17 210 66.  66
  91.7    292.3   9 27 50.9   9 14 40.2  2805 F2     66/05/20
 2439266    13.9 N    146.1 E    6.0
                  66      91.7      292.3    09-27-50.9    09-14-40.
2   FRFEGUGLIU                                           17 CAROL
INE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS

 95  2805 F3 66  5 20 2439266 13.9 N 146.1 E 17 210 66.  66
  91.7    292.3   9 27 50.9   9 14 40.2  2805 F3     66/05/20
 2439266    13.9 N    146.1 E    6.0
                  66      91.7      292.3    09-27-50.9    09-14-40.
2   FRFEGUGLIU                                           17 CAROL
INE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS

 95  2805 F4 66  5 20 2439266 13.9 N 146.1 E 17 210 66.  66
  91.7    292.3   9 27 50.9   9 14 40.2  2805 F4     66/05/20
 2439266    13.9 N    146.1 E    6.0
                  66      91.7      292.3    09-27-50.9    09-14-40.
2   FRFEGUGLIU                                           17 CAROL
INE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS

 96  2806 BM 66  5 20 2439266 55.0 N 165.7 E  1    4 46.  46
  52.7    313.7 11 53 40.6 11 44 22.4  2806 BM     66/05/20
 2439266    55.0 N    165.7 E    5.2
                  46      52.7      313.7    11-53-40.6    11-44-22.
4   TYQYELFOFF                                            1 ALASK
A - ALEUTIAN ARC                 4 KOMANDORSKY ISLANDS REGION

 96  2806 F1 66  5 20 2439266 55.0 N 165.7 E  1    4 46.  46
  52.7    313.7 11 53 40.6 11 44 22.4  2806 F1     66/05/20
 2439266    55.0 N    165.7 E    5.2
                  46      52.7      313.7    11-53-40.6    11-44-22.
4   TYQYELFOFF                                            1 ALASK
A - ALEUTIAN ARC                 4 KOMANDORSKY ISLANDS REGION

 96  2806 F2 66  5 20 2439266 55.0 N 165.7 E  1    4 46.  46
  52.7    313.7 11 53 40.6 11 44 22.4  2806 F2     66/05/20
 2439266    55.0 N    165.7 E    5.2
                  46      52.7      313.7    11-53-40.6    11-44-22.
4   TYQYELFOFF                                            1 ALASK
A - ALEUTIAN ARC                 4 KOMANDORSKY ISLANDS REGION

 96  2806 F3 66  5 20 2439266 55.0 N 165.7 E  1    4 46.  46
  52.7    313.7 11 53 40.6 11 44 22.4  2806 F3     66/05/20
 2439266    55.0 N    165.7 E    5.2
                  46      52.7      313.7    11-53-40.6    11-44-22.
4   TYQYELFOFF                                            1 ALASK
A - ALEUTIAN ARC                 4 KOMANDORSKY ISLANDS REGION

 96  2806 F4 66  5 20 2439266 55.0 N 165.7 E  1    4 46.  46
  52.7    313.7 11 53 40.6 11 44 22.4  2806 F4     66/05/20
 2439266    55.0 N    165.7 E    5.2
                  46      52.7      313.7    11-53-40.6    11-44-22.
```

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4    TYQYFLFUFF                                                    1 ALASK
A - ALEUTIAN ARC                       4 KOMANDORSKY ISLANDS REGION

 97  2831 BM 66  5 25 2439271 -6.4 S 131.1 E 24 280 39.  39
 116.8   290.6  8 47 39.2  8 32 37.0  2831 BM    66/05/25
 2439271     6.4 S   131.1 E   5.8
                  39   116.8    290.6   08-47-39.2   08-32-37.
0   IPIKMORPHL                                              24 SUNDA
 ARC                                 280 BANDA SEA

 97  2831 F1 66  5 25 2439271 -6.4 S 131.1 E 24 280 39.  39
 116.8   290.6  8 47 39.2  8 32 37.0  2831 F1    66/05/25
 2439271     6.4 S   131.1 E   5.8
                  39   116.8    290.6   08-47-39.2   08-32-37.
0   IPIKMORPHL                                              24 SUNDA
 ARC                                 280 BANDA SEA

 97  2831 F2 66  5 25 2439271 -6.4 S 131.1 E 24 280 39.  39
 116.8   290.6  8 47 39.2  8 32 37.0  2831 F2    66/05/25
 2439271     6.4 S   131.1 E   5.8
                  39   116.8    290.6   08-47-39.2   08-32-37.
0   IPIKMORPHL                                              24 SUNDA
 ARC                                 280 BANDA SEA

 97  2831 F3 66  5 25 2439271 -6.4 S 131.1 E 24 280 39.  39
 116.8   290.6  8 47 39.2  8 32 37.0  2831 F3    66/05/25
 2439271     6.4 S   131.1 E   5.8
                  39   116.8    290.6   08-47-39.2   08-32-37.
0   IPIKMORPHL                                              24 SUNDA
 ARC                                 280 BANDA SEA

 97  2831 F4 66  5 25 2439271 -6.4 S 131.1 E 24 280 39.  39
 116.8   290.6  8 47 39.2  8 32 37.0  2831 F4    66/05/25
 2439271     6.4 S   131.1 E   5.8
                  39   116.8    290.6   08-47-39.2   08-32-37.
0   IPIKMORPHL                                              24 SUNDA
 ARC                                 280 BANDA SEA

 98  2883 BM 66  6  4 2439281 34.0 N  77.0 E 26 302207. 207
  99.5   357.3  5 25  4.8  5 11 18.6  2883 BM    66/06/04
 2439281    34.0 N   077.0 E   5.7
                207     99.5    357.3   05-25-04.8   05-11-18.
6   QPMLVHCGSI                                              26 INDIA
 - TIBET - SZECHWAN - YUNAN 302 EASTERN KASHMIR

 98  2883 F1 66  6  4 2439281 34.0 N  77.0 E 26 302207. 207
  99.5   357.3  5 25  4.8  5 11 18.6  2883 F1    66/06/04
 2439281    34.0 N   077.0 E   5.7
                207     99.5    357.3   05-25-04.8   05-11-18.
6   QPMLVHCGSI                                              26 INDIA
 - TIBET - SZECHWAN - YUNAN 302 EASTERN KASHMIR

 98  2883 F2 66  6  4 2439281 34.0 N  77.0 E 26 302207. 207
  99.5   357.3  5 25  4.8  5 11 18.6  2883 F2    66/06/04
 2439281    34.0 N   077.0 E   5.7
                207     99.5    357.3   05-25-04.8   05-11-18.
6   QPMLVHCGSI                                              26 INDIA
 - TIBET - SZECHWAN - YUNAN 302 EASTERN KASHMIR

 98  2883 F3 66  6  4 2439281 34.0 N  77.0 E 26 302207. 207
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```
 99.5   357.3  5 25  4.8  5 11 18.6  2883 F3    66/06/04
2439281   34.0 N   077.0 E   5.7
              207    99.5   357.3   05-25-04.8   05-11-18.
6   QPMLVHCGSI                                   26 INDIA
- TIBET - SZECHWAN - YUNAN 302 EASTERN KASHMIR

98  2883 F4 66  6  4 2439281 34.0 N  77.0 E 26 302207. 207
 99.5   357.3  5 25  4.8  5 11 18.6  2883 F4    66/06/04
2439281   34.0 N   077.0 E   5.7
              207    99.5   357.3   05-25-04.8   05-11-18.
6   QPMLVHCGSI                                   26 INDIA
- TIBET - SZECHWAN - YUNAN 302 EASTERN KASHMIR

99  2880 BM 66  6 10 2439287 47.0 N 155.0 E 19 222 33.  33
 62.8   310.6  9 21 56.0  9 11 26.5  2880 BM    66/06/10
2439287   47.0 N   155.0 E   4.5
              33    62.8    310.6   09-21-56.0   09-11-26.
5   VQSBLUEZHT                                   19 JAPAN
- KURILES - KAMCHATKA      222 KURILE ISLANDS REGION

99  2880 F1 66  6 10 2439287 47.0 N 155.0 E 19 222 33.  33
 62.8   310.6  9 21 56.0  9 11 26.5  2880 F1    66/06/10
2439287   47.0 N   155.0 E   4.5
              33    62.8    310.6   09-21-56.0   09-11-26.
5   VQSBLUEZHT                                   19 JAPAN
- KURILES - KAMCHATKA      222 KURILE ISLANDS REGION

99  2880 F2 66  6 10 2439287 47.0 N 155.0 E 19 222 33.  33
 62.8   310.6  9 21 56.0  9 11 26.5  2880 F2    66/06/10
2439287   47.0 N   155.0 E   4.5
              33    62.8    310.6   09-21-56.0   09-11-26.
5   VQSBLUEZHT                                   19 JAPAN
- KURILES - KAMCHATKA      222 KURILE ISLANDS REGION

99  2880 F3 66  6 10 2439287 47.0 N 155.0 E 19 222 33.  33
 62.8   310.6  9 21 56.0  9 11 26.5  2880 F3    66/06/10
2439287   47.0 N   155.0 E   4.5
              33    62.8    310.6   09-21-56.0   09-11-26.
5   VQSBLUEZHT                                   19 JAPAN
- KURILES - KAMCHATKA      222 KURILE ISLANDS REGION

99  2880 F4 66  6 10 2439287 47.0 N 155.0 E 19 222 33.  33
 62.8   310.6  9 21 56.0  9 11 26.5  2880 F4    66/06/10
2439287   47.0 N   155.0 E   4.5
              33    62.8    310.6   09-21-56.0   09-11-26.
5   VQSBLUEZHT                                   19 JAPAN
- KURILES - KAMCHATKA      222 KURILE ISLANDS REGION

100  2326 BM 66  6 30 2439307 43.6 N 132.2 E 51 661454. 454
 76.3   320.5  9 10 50.4  8 58 58.1  2326 BM    66/06/30
2439307   43.6 N   132.2 E   5.4
              454    76.3   320.5   09-10-50.4   08-58-58.
1   EPLPQUDVTH                                   51 S REG
= 19,20 OR 41 AND D GT 300 661 NEAR E. COAST OF EASTERN RUS
SIA

100  2326 F1 66  6 30 2439307 43.6 N 132.2 E 51 661454. 454
 76.3   320.5  9 10 50.4  8 58 58.1  2326 F1    66/06/30
2439307   43.6 N   132.2 E   5.4
              454    76.3   320.5   09-10-50.4   08-58-58.
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1    EPLPOODVTH                                            51 S REG
 = 19,20 OR 41 AND D GT 300 661 NEAR E. COAST OF EASTERN RUS
SIA

100  2326 F2 66  6 30 2439307 43.6 N 132.2 E 51 661454. 454
  76.3   320.5  9 10 50.4  8 58 58.1  2326 F2     66/06/30
 2439307   43.6 N   132.2 E   5.4
                454    76.3     320.5   09-10-50.4   08-58-58.
1    EPLPOODVTH                                            51 S REG
 = 19,20 OR 41 AND D GT 300 661 NEAR E. COAST OF EASTERN RUS
SIA

100  2326 F3 66  6 30 2439307 43.6 N 132.2 E 51 661454. 454
  76.3   320.5  9 10 50.4  8 58 58.1  2326 F3     66/06/30
 2439307   43.6 N   132.2 E   5.4
                454    76.3     320.5   09-10-50.4   08-58-58.
1    EPLPOODVTH                                            51 S REG
 = 19,20 OR 41 AND D GT 300 661 NEAR E. COAST OF EASTERN RUS
SIA

100  2326 F4 66  6 30 2439307 43.6 N 132.2 E 51 661454. 454
  76.3   320.5  9 10 50.4  8 58 58.1  2326 F4     66/06/30
 2439307   43.6 N   132.2 E   5.4
                454    76.3     320.5   09-10-50.4   08-58-58.
1    EPLPOODVTH                                            51 S REG
 = 19,20 OR 41 AND D GT 300 661 NEAR E. COAST OF EASTERN RUS
SIA

101  2904 RM 66  7  7 2439314 12.6 N 144.2 E 17 210 40.  40
 93.9   292.9  9 59 48.1  9 46 27.4  2904 RM     66/07/07
2439314   12.6 N   144.2 E   5.3
                40     93.9    292.9   09-59-48.1   09-46-27.4
   ZWTUYWOQZL                                            17 CAROLI
NE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS

101  2904 F1 66  7  7 2439314 12.6 N 144.2 E 17 210 40.  40
  93.9   292.9  9 59 48.1  9 46 27.4  2904 F1     66/07/07
 2439314   12.6 N   144.2 E   5.3
                40     93.9     292.9   09-59-48.1   09-46-27.
4    ZWTUYWOQZL                                            17 CAROL
INE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS

101  2904 F2 66  7  7 2439314 12.6 N 144.2 E 17 210 40.  40
  93.9   292.9  9 59 48.1  9 46 27.4  2904 F2     66/07/07
 2439314   12.6 N   144.2 E   5.3
                40     93.9     292.9   09-59-48.1   09-46-27.
4    ZWTUYWOQZL                                            17 CAROL
INE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS

101  2904 F3 66  7  7 2439314 12.6 N 144.2 E 17 210 40.  40
  93.9   292.9  9 59 48.1  9 46 27.4  2904 F3     66/07/07
 2439314   12.6 N   144.2 E   5.3
                40     93.9     292.9   09-59-48.1   09-46-27.
4    ZWTUYWOQZL                                            17 CAROL
INE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS

101  2904 F4 66  7  7 2439314 12.6 N 144.2 E 17 210 40.  40
  93.9   292.9  9 59 48.1  9 46 27.4  2904 F4     66/07/07
 2439314   12.6 N   144.2 E   5.3
                40     93.9     292.9   09-59-48.1   09-46-27.
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4   ZWTUYWOQ7L                                          17 CAROL
INE ISLANDS TO GUAM          210 SOUTH OF MARIANA ISLANDS

102  1178 BM 66  8 19 2439357 36.4 N 141.7 E 19 228 28.  28
  77.3   310.1 12 58 17.3 12 46 19.7  1178 BM    66/08/19
 2439357   36.4 N   141.7 E   5.5
                 28     77.3     310.1    12-58-17.3    12-46-19.
7   ZROBQJSRLM                                          19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
102  1178 F1 66  8 19 2439357 36.4 N 141.7 E 19 228 28.  28
  77.3   310.1 12 58 17.3 12 46 19.7  1178 F1    66/08/19
 2439357   36.4 N   141.7 E   5.5
                 28     77.3     310.1    12-58-17.3    12-46-19.
7   ZROBQJSRLM                                          19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
102  1178 F2 66  8 19 2439357 36.4 N 141.7 E 19 228 28.  28
  77.3   310.1 12 58 17.3 12 46 19.7  1178 F2    66/08/19
 2439357   36.4 N   141.7 E   5.5
                 28     77.3     310.1    12-58-17.3    12-46-19.
7   ZROBQJSRLM                                          19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
102  1178 F3 66  8 19 2439357 36.4 N 141.7 E 19 228 28.  28
  77.3   310.1 12 58 17.3 12 46 19.7  1178 F3    66/08/19
 2439357   36.4 N   141.7 E   5.5
                 28     77.3     310.1    12-58-17.3    12-46-19.
7   ZROBGJSRLM                                          19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
102  1178 F4 66  8 19 2439357 36.4 N 141.7 E 19 228 28.  28
  77.3   310.1 12 58 17.3 12 46 19.7  1178 F4    66/08/19
 2439357   36.4 N   141.7 E   5.5
                 28     77.3     310.1    12-58-17.3    12-46-19.
7   ZROBQJSRLM                                          19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
103  2014 BM 66  9 10 2439379 46.6 N 144.1 E 51 663335. 335
  68.5   315.9  2 38 16.2  2 27 10.1  2014 BM    66/09/10
 2439379   46.6 N   144.1 E   5.2
                335     68.5     315.9    02-38-16.2    02-27-10.
1   VESJLQRECZ                                          51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

103  2014 F1 66  9 10 2439379 46.6 N 144.1 E 51 663335. 335
  68.5   315.9  2 38 16.2  2 27 10.1  2014 F1    66/09/10
 2439379   46.6 N   144.1 E   5.2
                335     68.5     315.9    02-38-16.2    02-27-10.
1   VESJLQRECZ                                          51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

103  2014 F2 66  9 10 2439379 46.6 N 144.1 E 51 663335. 335
  68.5   315.9  2 38 16.2  2 27 10.1  2014 F2    66/09/10
 2439379   46.6 N   144.1 E   5.2
                335     68.5     315.9    02-38-16.2    02-27-10.
1   VESJLQRECZ                                          51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

103  2014 F3 66  9 10 2439379 46.6 N 144.1 E 51 663335. 335
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   68.5    315.9  2 38 16.2  2 27 10.1  2014 F3     66/09/10
 2439379    46.6 N    144.1 E    5.2
                 335     68.5      315.9   02-38-16.2   02-27-10.
1   VESJLQRECZ                                          51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

103  2014 F4 66  9 10 2439379 46.6 N 144.1 E 51 663335. 335
   68.5    315.9  2 38 16.2  2 27 10.1  2014 F4     66/09/10
 2439379    46.6 N    144.1 E    5.2
                 335     68.5      315.9   02-38-16.2   02-27-10.
1   VESJLQRECZ                                          51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

104  1545 BM 66 10 15 2439414 45.7 N  26.3 E 52 358120. 120
   78.9     31.7  7 11  8.6  6 59  2.0  1545 BM     66/10/15
 2439414    45.7 N    026.3 E    4.8
                 120     78.9       31.7   07-11-08.6   06-59-02.
0   HITLOVBQWJ                                          52 G REG
 = 358 AND D GT 70           358 RUMANIA

104  1545 F1 66 10 15 2439414 45.7 N  26.3 E 52 358120. 120
   78.9     31.7  7 11  8.6  6 59  2.0  1545 F1     66/10/15
 2439414    45.7 N    026.3 E    4.8
                 120     78.9       31.7   07-11-08.6   06-59-02.
0   HITLOVBQWJ                                          52 G REG
 = 358 AND D GT 70           358 RUMANIA

104  1545 F2 66 10 15 2439414 45.7 N  26.3 E 52 358120. 120
   78.9     31.7  7 11  8.6  6 59  2.0  1545 F2     66/10/15
 2439414    45.7 N    026.3 E    4.8
                 120     78.9       31.7   07-11-08.6   06-59-02.
0   HITLOVBQWJ                                          52 G REG
 = 358 AND D GT 70           358 RUMANIA

104  1545 F3 66 10 15 2439414 45.7 N  26.3 E 52 358120. 120
   78.9     31.7  7 11  8.6  6 59  2.0  1545 F3     66/10/15
 2439414    45.7 N    026.3 E    4.8
                 120     78.9       31.7   07-11-08.6   06-59-02.
0   HITLOVBQWJ                                          52 G REG
 = 358 AND D GT 70           358 RUMANIA

104  1545 F4 66 10 15 2439414 45.7 N  26.3 E 52 358120. 120
   78.9     31.7  7 11  8.6  6 59  2.0  1545 F4     66/10/15
 2439414    45.7 N    026.3 E    4.8
                 120     78.9       31.7   07-11-08.6   06-59-02.
0   HITLOVBQWJ                                          52 G REG
 = 358 AND D GT 70           358 RUMANIA

105  1660 BM 66 10 29 2439428 39.2 N  21.2 E 30 364 20.  20
   82.4     38.4  2 51 51.7  2 39 26.7  1660 BM     66/10/29
 2439428    39.2 N    021.2 E    5.7
                  20     82.4       38.4   02-51-51.7   02-39-26.
7   CJLFFGVZJI                                          30 MIDDL
E EAST - CRIMEA - BALKANS   364 GREECE

105  1660 F1 66 10 29 2439428 39.2 N  21.2 E 30 364 20.  20
   82.4     38.4  2 51 51.7  2 39 26.7  1660 F1     66/10/29
 2439428    39.2 N    021.2 E    5.7
                  20     82.4       38.4   02-51-51.7   02-39-26.
7   CJLFFGVZJI                                          30 MIDDL
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E EAST - CRIMEA - BALKANS   364 GREECE

105  1660 F2 66 10 29 2439428 39.2 N  21.2 E 30 364 20.  20
  82.4     38.4  2 51 51.7  2 39 26.7  1660 F2    66/10/29
 2439428   39.2 N    021.2 F    5.7
                 20      82.4      38.4   02-51-51.7   02-39-26.
7   CJLFFQVZJI                                          30 MIDDL
F EAST - CRIMEA - BALKANS   364 GREECE

105  1660 F3 66 10 29 2439428 39.2 N  21.2 E 30 364 20.  20
  82.4     38.4  2 51 51.7  2 39 26.7  1660 F3    66/10/29
 2439428   39.2 N    021.2 F    5.7
                 20      82.4      38.4   02-51-51.7   02-39-26.
7   CJLFFQVZJI                                          30 MIDDL
E EAST - CRIMEA - BALKANS   364 GREECE

105  1660 F4 66 10 29 2439428 39.2 N  21.2 E 30 364 20.  20
  82.4     38.4  2 51 51.7  2 39 26.7  1660 F4    66/10/29
 2439428   39.2 N    021.2 F    5.7
                 20      82.4      38.4   02-51-51.7   02-39-26.
7   CJLFFQVZJI                                          30 MIDDL
F EAST - CRIMEA - BALKANS   364 GREECE

106  1714 BM 66 11   8 2439438 52.4 N 173.0 E  1   5 41.  41
  50.1   308.1 11 44 50.2 11 35 51.2  1714 BM    66/11/08
 2439438   52.4 N   173.0 F    4.9
                 41      50.1     308.1   11-44-50.2   11-35-51.
2   QHTOWHIYSL                                          1 ALASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
106  1714 F1 66 11   8 2439438 52.4 N 173.0 E  1   5 41.  41
  50.1   308.1 11 44 50.2 11 35 51.2  1714 F1    66/11/08
 2439438   52.4 N   173.0 E    4.9
                 41      50.1     308.1   11-44-50.2   11 [illegible] 51.
2   QHTOWHIYSL                                          [illegible]LASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
106  1714 F2 66 11   8 2439438 52.4 N 173.0 E  1   5 41.  41
  50.1   308.1 11 44 50.2 11 35 51.2  1714 F2    66/11/08
 2439438   52.4 N   173.0 E    4.9
                 41      50.1     308.1   11-44-50.2   11-35-51.
2   QHTOWHIYSL                                          1 ALASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
106  1714 F3 66 11   8 2439438 52.4 N 173.0 E  1   5 41.  41
  50.1   308.1 11 44 50.2 11 35 51.2  1714 F3    66/11/08
 2439438   52.4 N   173.0 E    4.9
                 41      50.1     308.1   11-44-50.2   11-35-51.
2   QHTOWHIYSL                                          1 ALASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
106  1714 F4 66 11   8 2439438 52.4 N 173.0 E  1   5 41.  41
  50.1   308.1 11 44 50.2 11 35 51.2  1714 F4    66/11/08
 2439438   52.4 N   173.0 E    4.9
                 41      50.1     308.1   11-44-50.2   11-35-51.
2   QHTOWHIYSL                                          1 ALASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
107  1612 BM 66 11   9 2439439 26.9 N 125.5 E 21 245 39.  39
  93.1   315.5 11 39 36.1 11 26 18.8  1612 BM    66/11/09
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 2439439   26.9 N   125.5 E   5.4
                  39     93.1    315.5   11-39-36.1   11-26-18.
8   JUSVMLMDIC                                          21 TAIWA
N                             245 NORTHEAST OF TAIWAN

107  1612 F1 66 11  9 2439439 26.9 N 125.5 E 21 245 39.  39
  93.1   315.5 11 39 36.1 11 26 18.8  1612 F1    66/11/09
 2439439   26.9 N   125.5 E   5.4
                  39     93.1    315.5   11-39-36.1   11-26-18.
8   JUSVMLMDIC                                          21 TAIWA
N                             245 NORTHEAST OF TAIWAN

107  1612 F2 66 11  9 2439439 26.9 N 125.5 E 21 245 39.  39
  93.1   315.5 11 39 36.1 11 26 18.8  1612 F2    66/11/09
 2439439   26.9 N   125.5 E   5.4
                  39     93.1    315.5   11-39-36.1   11-26-18.
8   JUSVMLMDIC                                          21 TAIWA
N                             245 NORTHEAST OF TAIWAN

107  1612 F3 66 11  9 2439439 26.9 N 125.5 E 21 245 39.  39
  93.1   315.5 11 39 36.1 11 26 18.8  1612 F3    66/11/09
 2439439   26.9 N   125.5 E   5.4
                  39     93.1    315.5   11-39-36.1   11-26-18.
8   JUSVMLMDIC                                          21 TAIWA
N                             245 NORTHEAST OF TAIWAN

107  1612 F4 66 11  9 2439439 26.9 N 125.5 E 21 245 39.  39
  93.1   315.5 11 39 36.1 11 26 18.8  1612 F4    66/11/09
 2439439   26.9 N   125.5 E   5.4
                  39     93.1    315.5   11-39-36.1   11-26-18.
8   JUSVMLMDIC                                          21 TAIWA
N                             245 NORTHEAST OF TAIWAN

108  1674 BM 66 11 12 2439442-23.8 S -67.6 W  8 124126. 126
  78.5    144.4 12  2 19.7 11 50 15.3  1674 BM    66/11/12
 2439442   23.8 S   067.6 W   5.6
                 126     78.5    144.4   12-02-19.7   11-50-15.
3   UZRCLBJQFZ                                          8 ANDEA
N SOUTH AMERICA               124 CHILE-BOLIVIA BORDER REGION

108  1674 F1 66 11 12 2439442-23.8 S -67.6 W  8 124126. 126
  78.5    144.4 12  2 19.7 11 50 15.3  1674 F1    66/11/12
 2439442   23.8 S   067.6 W   5.6
                 122     78.5    144.4   12-02-19.7   11-50-15.
3   UZRCLBJQFZ                                          8 ANDEA
N SOUTH AMERICA               124 CHILE-BOLIVIA BORDER REGION

108  1674 F2 66 11 12 2439442-23.8 S -67.6 W  8 124126. 126
  78.5    144.4 12  2 19.7 11 50 15.3  1674 F2    66/11/12
 2439442   23.8 S   067.6 W   5.6
                 126     78.5    144.4   12-02-19.7   11-50-15.
3   UZRCLBJQFZ                                          8 ANDEA
N SOUTH AMERICA               124 CHILE-BOLIVIA BORDER REGION

108  1674 F3 66 11 12 2439442-23.8 S -67.6 W  8 124126. 126
  78.5    144.4 12  2 19.7 11 50 15.3  1674 F3    66/11/12
 2439442   23.8 S   067.6 W   5.6
                 126     78.5    144.4   12-02-19.7   11-50-15.
3   UZRCLBJQFZ                                          8 ANDEA
N SOUTH AMERICA               124 CHILE-BOLIVIA BORDER REGION
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108  1674 F4 66 11 12 2439442-23.8 S -67.6 W  8 124126. 126
  78.5   144.4 12  2 19.7 11 50 15.3  1674 F4    66/11/12
 2439442   23.8 S   067.6 W   5.6
                  126    78.5    144.4   12-02-19.7   11-50-15.
3  UZRCLBJQFZ                                          8 ANDEA
N SOUTH AMERICA               124 CHILE-BOLIVIA BORDER REGION

109  1675 BM 66 11 12 2439442 41.8 N 144.1 E 19 224 33.  33
  72.0   312.4 13  1  6.0 12 49 38.0  1675 BM    66/11/12
 2439442   41.8 N   144.1 E   5.8
                  33    72.0    312.4   13-01-06.0   12-49-38.
0   HMGVOWLOGJ                                      19 JAPAN
 - KURILES - KAMCHATKA      224 HOKKAIDO, JAPAN, REGION

109  1675 F1 66 11 12 2439442 41.8 N 144.1 E 19 224 33.  33
  72.0   312.4 13  1  6.0 12 49 38.0  1675 F1    66/11/12
 2439442   41.8 N   144.1 E   5.8
                  33    72.0    312.4   13-01-06.0   12-49-38.
0   HMGVOWLOGJ                                      19 JAPAN
 - KURILES - KAMCHATKA      224 HOKKAIDO, JAPAN, REGION

109  1675 F2 66 11 12 2439442 41.8 N 144.1 E 19 224 33.  33
  72.0   312.4 13  1  6.0 12 49 38.0  1675 F2    66/11/12
 2439442   41.8 N   144.1 E   5.8
                  33    72.0    312.4   13-01-06.0   12-49-38.
0   HMGVOWLOGJ                                      19 JAPAN
 - KURILES - KAMCHATKA      224 HOKKAIDO, JAPAN, REGION

109  1675 F3 66 11 12 2439442 41.8 N 144.1 E 19 224 33.  33
  72.0   312.4 13  1  6.0 12 49 38.0  1675 F3    66/11/12
 2439442   41.8 N   144.1 E   5.8
                  33    72.0    312.4   13-01-06.0   12-49-38.
0   HMGVOWLOGJ                                      19 JAPAN
 - KURILES - KAMCHATKA      224 HOKKAIDO, JAPAN, REGION

109  1675 F4 66 11 12 2439442 41.8 N 144.1 E 19 224 33.  33
  72.0   312.4 13  1  6.0 12 49 38.0  1675 F4    66/11/12
 2439442   41.8 N   144.1 E   5.8
                  33    72.0    312.4   13-01-06.0   12-49-38.
0   HMGVOWLOGJ                                      19 JAPAN
 - KURILES - KAMCHATKA      224 HOKKAIDO, JAPAN, REGION

110  2709 BM 66 11 19 2439449 35.0 N  23.5 E 30 370 33.  33
  86.9    39.1  7 25 22.6  7 12 34.9  2709 BM    66/11/19
 2439449   35.0 N   023.5 E   5.3
                  33    86.9     39.1   07-25-22.6   07-12-34.
9   WPLKPGOGDR                                      30 MIDDL
E EAST - CRIMEA - BALKANS   370 CRETE

110  2709 F1 66 11 19 2439449 35.0 N  23.5 E 30 370 33.  33
  86.9    39.1  7 25 22.6  7 12 34.9  2709 F1    66/11/19
 2439449   35.0 N   023.5 E   5.3
                  33    86.9     39.1   07-25-22.6   07-12-34.
9   WPLKPGOGDR                                      30 MIDDL
E EAST - CRIMEA - BALKANS   370 CRETE

110  2709 F2 66 11 19 2439449 35.0 N  23.5 E 30 370 33.  33
  86.9    39.1  7 25 22.6  7 12 34.9  2709 F2    66/11/19
 2439449   35.0 N   023.5 E   5.3
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                    33      86.9       39.1    07-25-22.6    07-12-34.
 9    WPLKPGOGDR                                              30 MIDDL
E EAST - CRIMEA - BALKANS    370 CRETE

110  2709 F3 66 11 19 2439449 35.0 N  23.5 E 30 370 33.  33
  86.9     39.1  7 25 22.6  7 12 34.9  2709 F3    66/11/19
 2439449   35.0 N   023.5 E    5.3
                    33      86.9       39.1    07-25-22.6    07-12-34.
 9    WPLKPGGGDR                                              30 MIDDL
E EAST - CRIMEA - BALKANS    370 CRETE

110  2709 F4 66 11 19 2439449 35.0 N  23.5 E 30 370 33.  33
  86.9     39.1  7 25 22.6  7 12 34.9  2709 F4    66/11/19
 2439449   35.0 N   023.5 E    5.3
                    33      86.9       39.1    07-25-22.6    07-12-34.
 9    WPLKPGGGDR                                              30 MIDDL
E EAST - CRIMEA - BALKANS    370 CRETE

111  2716 BM 66 11 19 2439449 40.5 N 142.7 E 19 228 33.  33
  73.7    312.2  7 42 46.3  7 31  9.2  2716 BM    66/11/19
 2439449   40.5 N   142.7 E    4.3
                    33      73.7      312.2    07-42-46.3    07-31-09.
2    QILFPSIBOZ                                               19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
111  2716 F1 66 11 19 2439449 40.5 N 142.7 E 19 228 33.  33
  73.7    312.2  7 42 46.3  7 31  9.2  2716 F1    66/11/19
 2439449   40.5 N   142.7 E    4.3
                    33      73.7      312.2    07-42-46.3    07-31-09.
2    QILFPSIBOZ                                               19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
111  2716 F2 66 11 19 2439449 40.5 N 142.7 E 19 228 33.  33
  73.7    312.2  7 42 46.3  7 31  9.2  2716 F2    66/11/19
 2439449   40.5 N   142.7 E    4.3
                    33      73.7      312.2    07-42-46.3    07-31-09.
2    QILFPSIBOZ                                               19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
111  2716 F3 66 11 19 2439449 40.5 N 142.7 E 19 228 33.  33
  73.7    312.2  7 42 46.3  7 31  9.2  2716 F3    66/11/19
 2439449   40.5 N   142.7 E    4.3
                    33      73.7      312.2    07-42-46.3    07-31-09.
2    QILFPSIBOZ                                               19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
111  2716 F4 66 11 19 2439449 40.5 N 142.7 E 19 228 33.  33
  73.7    312.2  7 42 46.3  7 31  9.2  2716 F4    66/11/19
 2439449   40.5 N   142.7 E    4.3
                    33      73.7      312.2    07-42-46.3    07-31-09.
2    QILFPSIBOZ                                               19 JAPAN
 - KURILES - KAMCHATKA       228 NEAR EAST COAST OF HONSHU, J
APAN
112  1613 BM 66 11 21 2439451 46.7 N 152.5 E 19 221 40.  40
  64.3    311.6 12 30   .8 12 19 21.1  1613 BM    66/11/21
 2439451   46.7 N   152.5 E    5.6
                    40      64.3      311.6    12-30-00.8    12-19-21.
1    VVPTEPLGTJ                                               19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS
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112  1613 F1 66 11 21 2439451 46.7 N 152.5 E 19 221 40.  40
  64.3    311.6 12 30    .8 12 19 21.1   1613 F1     66/11/21
 2439451    46.7 N    152.5 E    5.6
                  40      64.3     311.6    12-30-00.8    12-19-21.
1    VVPTEPLQTJ                                            19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

112  1613 F2 66 11 21 2439451 46.7 N 152.5 E 19 221 40.  40
  64.3    311.6 12 30    .8 12 19 21.1   1613 F2     66/11/21
 2439451    46.7 N    152.5 E    5.6
                  40      64.3     311.6    12-30-00.8    12-19-21.
1    VVPTEPLQTJ                                            19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

112  1613 F3 66 11 21 2439451 46.7 N 152.5 E 19 221 40.  40
  64.3    311.6 12 30    .8 12 19 21.1   1613 F3     66/11/21
 2439451    46.7 N    152.5 E    5.6
                  40      64.3     311.6    12-30-00.8    12-19-21.
1    VVPTEPLQTJ                                            19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

112  1613 F4 66 11 21 2439451 46.7 N 152.5 E 19 221 40.  40
  64.3    311.6 12 30    .8 12 19 21.1   1613 F4     66/11/21
 2439451    46.7 N    152.5 E    5.6
                  40      64.3     311.6    12-30-00.8    12-19-21.
1    VVPTEPLQTJ                                            19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

113  2722 BM 66 11 22 2439452 48.2 N 146.7 E 51 663453. 453
  66.1    315.7  6 39 56.4  6 29  5.4  2722 BM     66/11/22
 2439452    48.2 N    146.7 E    5.6
                 453      66.1     315.7    06-39-56.4    06-29-05.
4    HUVJUCDQCL                                            51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

113  2722 F1 66 11 22 2439452 48.2 N 146.7 E 51 663453. 453
  66.1    315.7  6 39 56.4  6 29  5.4  2722 F1     66/11/22
 2439452    48.2 N    146.7 E    5.6
                 453      66.1     315.7    06-39-56.4    06-29-05.
4    HUVJUCDQCL                                            51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

113  2722 F2 66 11 22 2439452 48.2 N 146.7 E 51 663453. 453
  66.1    315.7  6 39 56.4  6 29  5.4  2722 F2     66/11/22
 2439452    48.2 N    146.7 E    5.6
                 453      66.1     315.7    06-39-56.4    06-29-05.
4    HUVJUCDQCL                                            51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

113  2722 F3 66 11 22 2439452 48.2 N 146.7 E 51 663453. 453
  66.1    315.7  6 39 56.4  6 29  5.4  2722 F3     66/11/22
 2439452    48.2 N    146.7 E    5.6
                 453      66.1     315.7    06-39-56.4    06-29-05.
4    HUVJUCDQCL                                            51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

113  2722 F4 66 11 22 2439452 48.2 N 146.7 E 51 663453. 453
  66.1    315.7  6 39 56.4  6 29  5.4  2722 F4     66/11/22
 2439452    48.2 N    146.7 E    5.6
                 453      66.1     315.7    06-39-56.4    06-29-05.
```

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4    HUVJUCDOCL                                           51 S REG
 = 19,20 OR 41 AND D GT 300 663 SEA OF OKHOTSK

114  2956 BM 66 11 29 2439459 55.0 N 154.0 E 41 663 33.  33
  58.3   318.2  8 19 13.7  8  9 14.9  2956 BM    66/11/29
 2439459   55.0 N   154.0 E   4.3
                 33     58.3    318.2   08-19-13.7   08-09-14.
9    EQOLVPWWJM                                           41 FASTE
RN ASIA                          663 SEA OF OKHOTSK

114  2956 F1 66 11 29 2439459 55.0 N 154.0 E 41 663 33.  33
  58.3   318.2  8 19 13.7  8  9 14.9  2956 F1    66/11/29
 2439459   55.0 N   154.0 E   4.3
                 33     58.3    318.2   08-19-13.7   08-09-14.
9    EQOLVPWWJM                                           41 FASTE
RN ASIA                          663 SEA OF OKHOTSK

114  2956 F2 66 11 29 2439459 55.0 N 154.0 E 41 663 33.  33
  58.3   318.2  8 19 13.7  8  9 14.9  2956 F2    66/11/29
 2439459   55.0 N   154.0 E   4.3
                 33     58.3    318.2   08-19-13.7   08-09-14.
9    EQOLVPWWJM                                           41 FASTE
RN ASIA                          663 SEA OF OKHOTSK

114  2956 F3 66 11 29 2439459 55.0 N 154.0 E 41 663 33.  33
  58.3   318.2  8 19 13.7  8  9 14.9  2956 F3    66/11/29
 2439459   55.0 N   154.0 E   4.3
                 33     58.3    318.2   08-19-13.7   08-09-14.
9    EQOLVPWWJM                                           41 EASTE
RN ASIA                          663 SEA OF OKHOTSK

114  2956 F4 66 11 29 2439459 55.0 N 154.0 E 41 663 33.  33
  58.3   318.2  8 19 13.7  8  9 14.9  2956 F4    66/11/29
 2439459   55.0 N   154.0 E   4.3
                 33     58.3    318.2   08-19-13.7   08-09-14.
9    EQOLVPWWJM                                           41 EASTE
RN ASIA                          663 SEA OF OKHOTSK

115 11295 BM 73  5  5 2441808 37.1 N 176.0 E 39 611 41.  41
  56.5   290.5  3 52 26.0  3 42 39.7 11295 BM    73/05/05
 2441808   37.1 N   176.0 E   5.4
                 41     56.5    290.5   03-52-26.0   03-42-39.
7    WSHMPVQVLC                                           39 PACIF
IC BASIN                         611 NORTH PACIFIC OCEAN

115 11295 F1 73  5  5 2441808 37.1 N 176.0 E 39 611 41.  41
  56.5   290.5  3 52 26.0  3 42 39.7 11295 F1    73/05/05
 2441808   37.1 N   176.0 E   5.4
                 41     56.5    290.5   03-52-26.0   03-42-39.
7    WSHMPVQVLC                                           39 PACIF
IC BASIN                         611 NORTH PACIFIC OCEAN

115 11295 F2 73  5  5 2441808 37.1 N 176.0 E 39 611 41.  41
  56.5   290.5  3 52 26.0  3 42 39.7 11295 F2    73/05/05
 2441808   37.1 N   176.0 E   5.4
                 41     56.5    290.5   03-52-26.0   03-42-39.
7    WSHMPVQVLC                                           39 PACIF
IC BASIN                         611 NORTH PACIFIC OCEAN

115 11295 F3 73  5  5 2441808 37.1 N 176.0 E 39 611 41.  41
```

```
  56.5    290.5   3 52 26.0   3 42 39.7 11295 F3     73/05/05
 2441808    37.1 N    176.0 E    5.4
                  41     56.5     290.5    03-52-26.0    03-42-39.
7   WSHMPVGVLC                                             39 PACIF
IC BASIN                          611 NORTH PACIFIC OCEAN

115 11295 F4 73  5  5 2441808 37.1 N 176.0 E 39 611 41.  41
  56.5    290.5   3 52 26.0   3 42 39.7 11295 F4     73/05/05
 2441808    37.1 N    176.0 E    5.4
                  41     56.5     290.5    03-52-26.0    03-42-39.
7   WSHMPVGVLC                                             39 PACIF
IC BASIN                          611 NORTH PACIFIC OCEAN

116 11300 BM 73  5  8 2441811 45.6 N 149.6 E 19 221 95.  95
  66.5    312.2   7 48 59.0   7 38  5.5 11300 BM     73/05/08
 2441811    45.6 N    149.6 E    5.4
                  95     66.5     312.2    07-48-59.0    07-38-05.
5   QWPLRHEHTG                                             19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

116 11300 F1 73  5  8 2441811 45.6 N 149.6 E 19 221 95.  95
  66.5    312.2   7 48 59.0   7 38  5.5 11300 F1     73/05/08
 2441811    45.6 N    149.6 E    5.4
                  95     66.5     312.2    07-48-59.0    07-38-05.
5   QWPLRHEHTG                                             19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

116 11300 F2 73  5  8 2441811 45.6 N 149.6 E 19 221 95.  95
  66.5    312.2   7 48 59.0   7 38  5.5 11300 F2     73/05/08
 2441811    45.6 N    149.6 E    5.4
                  95     66.5     312.2    07-48-59.0    07-38-05.
5   QWPLRHEHTG                                             19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

116 11300 F3 73  5  8 2441811 45.6 N 149.6 E 19 221 95.  95
  66.5    312.2   7 48 59.0   7 38  5.5 11300 F3     73/05/08
 2441811    45.6 N    149.6 E    5.4
                  95     66.5     312.2    07-48-59.0    07-38-05.
5   QWPLRHEHTG                                             19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

116 11300 F4 73  5  8 2441811 45.6 N 149.6 E 19 221 95.  95
  66.5    312.2   7 48 59.0   7 38  5.5 11300 F4     73/05/08
 2441811    45.6 N    149.6 E    5.4
                  95     66.5     312.2    07-48-59.0    07-38-05.
5   QWPLRHEHTG                                             19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

117 11383 BM 73  5 10 2441813 51.4 N-179.5 W  1   7 61.  61
  46.4    304.2 11 39 31.0 11 31    .9 11383 BM     73/05/10
 2441813    51.4 N    179.5 W    5.3
                  61     46.4     304.2    11-39-31.0    11-31-00.
9   JQZVLSBMSM                                              1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
117 11383 F1 73  5 10 2441813 51.4 N-179.5 W  1   7 61.  61
  46.4    304.2 11 39 31.0 11 31    .9 11383 F1     73/05/10
 2441813    51.4 N    179.5 W    5.3
                  61     46.4     304.2    11-39-31.0    11-31-00.
9   JQZVLSBMSM                                              1 ALASK
```

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A - ALEUTIAN ARC                    7 ANDREANOF ISLANDS, ALEUTIAN
IS.
117 11383 F2 73  5 10 2441813 51.4 N-179.5 W  1    7 61.  61
 46.4   304.2 11 39 31.0 11 31    .9 11383 F2     73/05/10
 2441813   51.4 N    179.5 W    5.3
                   61     46.4     304.2    11-39-31.0    11-31-00.
9    JQZVLSBMSM                                           1 ALASK
A - ALEUTIAN ARC                    7 ANDREANOF ISLANDS, ALEUTIAN
IS.
117 11383 F3 73  5 10 2441813 51.4 N-179.5 W  1    7 61.  61
 46.4   304.2 11 39 31.0 11 31    .9 11383 F3     73/05/10
 2441813   51.4 N    179.5 W    5.3
                   61     46.4     304.2    11-39-31.0    11-31-00.
9    JQZVLSBMSM                                           1 ALASK
A - ALEUTIAN ARC                    7 ANDREANOF ISLANDS, ALEUTIAN
IS.
117 11383 F4 73  5 10 2441813 51.4 N-179.5 W  1    7 61.  61
 46.4   304.2 11 39 31.0 11 31    .9 11383 F4     73/05/10
 2441813   51.4 N    179.5 W    5.3
                   61     46.4     304.2    11-39-31.0    11-31-00.
9    JQZVLSBMSM                                           1 ALASK
A - ALEUTIAN ARC                    7 ANDREANOF ISLANDS, ALEUTIAN
IS.
118 11304 BM 73  5 10 2441813 19.0 N-104.8 W  5   55 33.  33
 27.7   177.1 17 50 53.0 17 45  1.4 11304 BM      73/05/10
 2441813   19.0 N    104.8 W    5.0
                   33     27.7     177.1    17-50-53.0    17-45-01.
4    KUTLWQSPOB                                           5 MEXIC
O - GUATEMALA AREA                 55 NEAR COAST OF JALISCO, MEXIC
O
118 11304 F1 73  5 10 2441813 19.0 N-104.8 W  5   55 33.  33
 27.7   177.1 17 50 53.0 17 45  1.4 11304 F1      73/05/10
 2441813   19.0 N    104.8 W    5.0
                   33     27.7     177.1    17-50-53.0    17-45-01.
4    KUTLWQSPOB                                           5 MEXIC
O - GUATEMALA AREA                 55 NEAR COAST OF JALISCO, MEXIC
O
118 11304 F2 73  5 10 2441813 19.0 N-104.8 W  5   55 33.  33
 27.7   177.1 17 50 53.0 17 45  1.4 11304 F2      73/05/10
 2441813   19.0 N    104.8 W    5.0
                   33     27.7     177.1    17-50-53.0    17-45-01.
4    KUTLWQSPOB                                           5 MEXIC
O - GUATEMALA AREA                 55 NEAR COAST OF JALISCO, MEXIC
O
118 11304 F3 73  5 10 2441813 19.0 N-104.8 W  5   55 33.  33
 27.7   177.1 17 50 53.0 17 45  1.4 11304 F3      73/05/10
 2441813   19.0 N    104.8 W    5.0
                   33     27.7     177.1    17-50-53.0    17-45-01.
4    KUTLWQSPOB                                           5 MEXIC
O - GUATEMALA AREA                 55 NEAR COAST OF JALISCO, MEXIC
O
118 11304 F4 73  5 10 2441813 19.0 N-104.8 W  5   55 33.  33
 27.7   177.1 17 50 53.0 17 45  1.4 11304 F4      73/05/10
 2441813   19.0 N    104.8 W    5.0
                   33     27.7     177.1    17-50-53.0    17-45-01.
4    KUTLWQSPOB                                           5 MEXIC
O - GUATEMALA AREA                 55 NEAR COAST OF JALISCO, MEXIC
O
119 11312 BM 73  5 14 2441817 44.1 N 148.2 E 19 221 64.  64
 68.2   311.8  2 19  1.0  2  7 56.5 11312 BM      73/05/14
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 2441817    44.1 N    148.2 E    5.5
                64     68.2     311.8    02-19-01.0    02-07-56.
5    DSMBMMQHSL                                          19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

119 11312 F1 73   5 14 2441817 44.1 N 148.2 E 19 221 64.  64
  68.2    311.8   2 19   1.0   2   7 56.5 11312 F1     73/05/14
 2441817    44.1 N    148.2 E    5.5
                64     68.2     311.8    02-19-01.0    02-07-56.
5    DSMBMMQHSL                                          19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

119 11312 F2 73   5 14 2441817 44.1 N 148.2 E 19 221 64.  64
  68.2    311.8   2 19   1.0   2   7 56.5 11312 F2     73/05/14
 2441817    44.1 N    148.2 E    5.5
                64     68.2     311.8    02-19-01.0    02-07-56.
5    DSMBMMQHSL                                          19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

119 11312 F3 73   5 14 2441817 44.1 N 148.2 E 19 221 64.  64
  68.2    311.8   2 19   1.0   2   7 56.5 11312 F3     73/05/14
 2441817    44.1 N    148.2 E    5.5
                64     68.2     311.8    02-19-01.0    02-07-56.
5    DSMBMMQHSL                                          19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

119 11312 F4 73   5 14 2441817 44.1 N 148.2 E 19 221 64.  64
  68.2    311.8   2 19   1.0   2   7 56.5 11312 F4     73/05/14
 2441817    44.1 N    148.2 E    5.5
                64     68.2     311.8    02-19-01.0    02-07-56.
5    DSMBMMQHSL                                          19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

120 11316 BM 73   5 17 2441820 41.0 N  82.2 E 27 321 33.  33
  92.3    353.6   9 38   9.0   9 24 55.6 11316 BM     73/05/17
 2441820    41.0 N    082.2 E    5.5
                33     92.3     353.6    09-38-09.0    09-24-55.
6    TQTUDDYEML                                         27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
NA
120 11316 F1 73   5 17 2441820 41.0 N  82.2 E 27 321 33.  33
  92.3    353.6   9 38   9.0   9 24 55.6 11316 F1     73/05/17
 2441820    41.0 N    082.2 E    5.5
                33     92.3     353.6    09-38-09.0    09-24-55.
6    TQTUDDYEML                                         27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
NA
120 11316 F2 73   5 17 2441820 41.0 N  82.2 E 27 321 33.  33
  92.3    353.6   9 38   9.0   9 24 55.6 11316 F2     73/05/17
 2441820    41.0 N    082.2 E    5.5
                33     92.3     353.6    09-38-09.0    09-24-55.
6    TQTUDDYEML                                         27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
NA
120 11316 F3 73   5 17 2441820 41.0 N  82.2 E 27 321 33.  33
  92.3    353.6   9 38   9.0   9 24 55.6 11316 F3     73/05/17
 2441820    41.0 N    082.2 E    5.5
                33     92.3     353.6    09-38-09.0    09-24-55.
6    TQTUDDYEML                                         27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
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NA
120 11316 F4 73  5 17 2441820 41.0 N  82.2 E 27 321 33.  33
  92.3    353.6   9 38   9.0   9 24 55.6 11316 F4     73/05/17
 2441820    41.0 N    082.2 E    5.5
                  33      92.3     353.6    09-38-09.0    09-24-55.
6    TQTUDDYEML                                           27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
NA
121 11324 BM 73  5 24 2441827 51.6 N-173.4 W  1    7 43.  43
  42.8    302.3 18 47 11.0 18 39  9.6 11324 BM     73/05/24
 2441827    51.6 N    173.4 W    5.4
                  43      42.8     302.3    18-47-11.0    18-39-09.
6    DSPWQBPLFE                                           1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
121 11324 F1 73  5 24 2441827 51.6 N-173.4 W  1    7 43.  43
  42.8    302.3 18 47 11.0 18 39  9.6 11324 F1     73/05/24
 2441827    51.6 N    173.4 W    5.4
                  43      42.8     302.3    18-47-11.0    18-39-09.
6    DSPWQBPLFE                                           1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
121 11324 F2 73  5 24 2441827 51.6 N-173.4 W  1    7 43.  43
  42.8    302.3 18 47 11.0 18 39  9.6 11324 F2     73/05/24
 2441827    51.6 N    173.4 W    5.4
                  43      42.8     302.3    18-47-11.0    18-39-09.
6    DSPWQBPLFE                                           1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
121 11324 F3 73  5 24 2441827 51.6 N-173.4 W  1    7 43.  43
  42.8    302.3 18 47 11.0 18 39  9.6 11324 F3     73/05/24
 2441827    51.6 N    173.4 W    5.4
                  43      42.8     302.3    18-47-11.0    18-39-09.
6    DSPWQBPLFE                                           1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
121 11324 F4 73  5 24 2441827 51.6 N-173.4 W  1    7 43.  43
  42.8    302.3 18 47 11.0 18 39  9.6 11324 F4     73/05/24
 2441827    51.6 N    173.4 W    5.4
                  43      42.8     302.3    18-47-11.0    18-39-09.
6    DSPWQBPLFE                                           1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
122 11330 BM 73  5 29 2441832 73.7 N    9.5 E 40 640 33.  33
  52.2     18.7   4 51 57.0   4 42 42.0 11330 BM     73/05/29
 2441832    73.7 N    0 9.5 E    4.8
                  33      52.2      18.7    04-51-57.0    04-42-42.
0    ZKULVQCKQG                                           40 ARCTI
C ZONE                          640 GREENLAND SEA

122 11330 F1 73  5 29 2441832 73.7 N    9.5 E 40 640 33.  33
  52.2     18.7   4 51 57.0   4 42 42.0 11330 F1     73/05/29
 2441832    73.7 N    0 9.5 E    4.8
                  33      52.2      18.7    04-51-57.0    04-42-42.
0    ZKULVQCKQG                                           40 ARCTI
C ZONE                          640 GREENLAND SEA

122 11330 F2 73  5 29 2441832 73.7 N    9.5 E 40 640 33.  33
  52.2     18.7   4 51 57.0   4 42 42.0 11330 F2     73/05/29
 2441832    73.7 N    0 9.5 E    4.8
```

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                     33     52.2      18.7   04-51-57.0    04-42-42.
0   ZKULVQCKOG                                             40 ARCTI
C ZONE                          640 GREENLAND SEA

122 11330 F3 73  5 29 2441832 73.7 N   9.5 E 40 640 33.  33
  52.2    18.7  4 51 57.0  4 42 42.0 11330 F3    73/05/29
 2441832   73.7 N   0 9.5 E   4.8
                     33     52.2      18.7   04-51-57.0    04-42-42.
0   ZKULVQCKOG                                             40 ARCTI
C ZONE                          640 GREENLAND SEA

122 11330 F4 73  5 29 2441832 73.7 N   9.5 E 40 640 33.  33
  52.2    18.7  4 51 57.0  4 42 42.0 11330 F4    73/05/29
 2441832   73.7 N   0 9.5 E   4.8
                     33     52.2      18.7   04-51-57.0    04-42-42.
0   ZKULVQCKOG                                             40 ARCTI
C ZONE                          640 GREENLAND SEA

123 11331 BM 73  5 29 2441832 54.0 N-163.8 W  1  10 30.  30
  36.5   303.3  6 14 22.0  6  7 12.7 11331 BM    73/05/29
 2441832   54.0 N   163.8 W   6.0
                     30     36.5     303.3   06-14-22.0    06-07-12.
7   VLRFBQRZCR                                              1 ALASK
A - ALEUTIAN ARC                 10 UNIMAK ISLAND REGION

123 11331 F1 73  5 29 2441832 54.0 N-163.8 W  1  10 30.  30
  36.5   303.3  6 14 22.0  6  7 12.7 11331 F1    73/05/29
 2441832   54.0 N   163.8 W   6.0
                     30     36.5     303.3   06-14-22.0    06-07-12.
7   VLRFBQRZCR                                              1 ALASK
A - ALEUTIAN ARC                 10 UNIMAK ISLAND REGION

123 11331 F2 73  5 29 2441832 54.0 N-163.8 W  1  10 30.  30
  36.5   303.3  6 14 22.0  6  7 12.7 11331 F2    73/05/29
 2441832   54.0 N   163.8 W   6.0
                     30     36.5     303.3   06-14-22.0    06-07-12.
7   VLRFBQRZCR                                              1 ALASK
A - ALEUTIAN ARC                 10 UNIMAK ISLAND REGION

123 11331 F3 73  5 29 2441832 54.0 N-163.8 W  1  10 30.  30
  36.5   303.3  6 14 22.0  6  7 12.7 11331 F3    73/05/29
 2441832   54.0 N   163.8 W   6.0
                     30     36.5     303.3   06-14-22.0    06-07-12.
7   VLRFBQRZCR                                              1 ALASK
A - ALEUTIAN ARC                 10 UNIMAK ISLAND REGION

123 11331 F4 73  5 29 2441832 54.0 N-163.8 W  1  10 30.  30
  36.5   303.3  6 14 22.0  6  7 12.7 11331 F4    73/05/29
 2441832   54.0 N   163.8 W   6.0
                     30     36.5     303.3   06-14-22.0    06-07-12.
7   VLRFBQRZCR                                              1 ALASK
A - ALEUTIAN ARC                 10 UNIMAK ISLAND REGION

124 11022 BM 73  6  7 2441841 14.2 N -91.9 W  5  71 70.  70
  34.6   155.0 18 34 46.0 18 27 53.5 11022 BM    73/06/07
 2441841   14.2 N   091.9 W   5.7
                     70     34.6     155.0   18-34-46.0    18-27-53.
5   DUTTQKZFPL                                              5 MEXIC
0 - GUATEMALA AREA               71 NEAR COAST OF GUATEMALA
```

```
124 11022 F1 73  6  7 2441841 14.2 N -91.9 W  5  71 70.  70
  34.6   155.0 18 34 46.0 18 27 53.5 11022 F1      73/06/07
 2441841   14.2 N   091.9 W   5.7
                  70      34.6     155.0   18-34-46.0   18-27-53.
5   DUTTQKZFPL                                          5 MEXIC
0 - GUATEMALA AREA               71 NEAR COAST OF GUATEMALA

124 11022 F2 73  6  7 2441841 14.2 N -91.9 W  5  71 70.  70
  34.6   155.0 18 34 46.0 18 27 53.5 11022 F2      73/06/07
 2441841   14.2 N   091.9 W   5.7
                  70      34.6     155.0   18-34-46.0   18-27-53.
5   DUTTQKZFPL                                          5 MEXIC
0 - GUATEMALA AREA               71 NEAR COAST OF GUATEMALA

124 11022 F3 73  6  7 2441841 14.2 N -91.9 W  5  71 70.  70
  34.6   155.0 18 34 46.0 18 27 53.5 11022 F3      73/06/07
 2441841   14.2 N   091.9 W   5.7
                  70      34.6     155.0   18-34-46.0   18-27-53.
5   DUTTGKZFPL                                          5 MEXIC
0 - GUATEMALA AREA               71 NEAR COAST OF GUATEMALA

124 11022 F4 73  6  7 2441841 14.2 N -91.9 W  5  71 70.  70
  34.6   155.0 18 34 46.0 18 27 53.5 11022 F4      73/06/07
 2441841   14.2 N   091.9 W   5.7
                  70      34.6     155.0   18-34-46.0   18-27-53.
5   DUTTQKZFPL                                          5 MEXIC
0 - GUATEMALA AREA               71 NEAR COAST OF GUATEMALA

125 11023 BM 73  6  9 2441843 39.4 N  95.4 E 27 322 33.  33
  92.1   343.4  8 18 32.0  8  5 19.7 11023 BM      73/06/09
 2441843   39.4 N   095.4 E   5.0
                  33      92.1     343.4   08-18-32.0   08-05-19.
7   UTSGLQZEHY                                         27 SOUTH
ERN SINKIANG TO KANSU        322 KANSU PROVINCE, CHINA

125 11023 F1 73  6  9 2441843 39.4 N  95.4 E 27 322 33.  33
  92.1   343.4  8 18 32.0  8  5 19.7 11023 F1      73/06/09
 2441843   39.4 N   095.4 E   5.0
                  33      92.1     343.4   08-18-32.0   08-05-19.
7   UTSGLQZEHY                                         27 SOUTH
ERN SINKIANG TO KANSU        322 KANSU PROVINCE, CHINA

125 11023 F2 73  6  9 2441843 39.4 N  95.4 E 27 322 33.  33
  92.1   343.4  8 18 32.0  8  5 19.7 11023 F2      73/06/09
 2441843   39.4 N   095.4 E   5.0
                  33      92.1     343.4   08-18-32.0   08-05-19.
7   UTSGLQZEHY                                         27 SOUTH
ERN SINKIANG TO KANSU        322 KANSU PROVINCE, CHINA

125 11023 F3 73  6  9 2441843 39.4 N  95.4 E 27 322 33.  33
  92.1   343.4  8 18 32.0  8  5 19.7 11023 F3      73/06/09
 2441843   39.4 N   095.4 E   5.0
                  33      92.1     343.4   08-18-32.0   08-05-19.
7   UTSGLQZEHY                                         27 SOUTH
ERN SINKIANG TO KANSU        322 KANSU PROVINCE, CHINA

125 11023 F4 73  6  9 2441843 39.4 N  95.4 E 27 322 33.  33
  92.1   343.4  8 18 32.0  8  5 19.7 11023 F4      73/06/09
 2441843   39.4 N   095.4 E   5.0
                  33      92.1     343.4   08-18-32.0   08-05-19.
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7   UTSGLQ7EHY                                    27 SOUTH
ERN SINKIANG TO KANSU       322 KANSU PROVINCE, CHINA

1
126 11089 BM 73  6 10 2441844 39.5 N  74.8 E 27 321 33.  33
 94.1    359.2 16  8 42.0 15 55 20.5 11089 BM     73/06/10
2441844   39.5 N   074.8 E   5.2
                33    94.1     359.2   16-08-42.0   15-55-20.5
   WBKULBTQVF                                     27 SOUTHE
RN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CHIN
A
126 11089 F1 73  6 10 2441844 39.5 N  74.8 E 27 321 33.  33
  94.1    359.2 16  8 42.0 15 55 20.5 11089 F1     73/06/10
 2441844   39.5 N   074.8 E   5.2
                33    94.1     359.2   16-08-42.0   15-55-20.
5   WBKULBTQVF                                    27 SOUTH
ERN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CHI
NA
126 11089 F2 73  6 10 2441844 39.5 N  74.8 E 27 321 33.  33
  94.1    359.2 16  8 42.0 15 55 20.5 11089 F2     73/06/10
 2441844   39.5 N   074.8 E   5.2
                33    94.1     359.2   16-08-42.0   15-55-20.
5   WBKULBTGVF                                    27 SOUTH
ERN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CHI
NA
126 11089 F3 73  6 10 2441844 39.5 N  74.8 E 27 321 33.  33
  94.1    359.2 16  8 42.0 15 55 20.5 11089 F3     73/06/10
 2441844   39.5 N   074.8 E   5.2
                33    94.1     359.2   16-08-42.0   15-55-20.
5   WBKULBTQVF                                    27 SOUTH
ERN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CHI
NA
126 11089 F4 73  6 10 2441844 39.5 N  74.8 E 27 321 33.  33
  94.1    359.2 16  8 42.0 15 55 20.5 11089 F4     73/06/10
 2441844   39.5 N   074.8 E   5.2
                33    94.1     359.2   16-08-42.0   15-55-20.
5   WBKULBTQVF                                    27 SOUTH
ERN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CHI
NA
127 11028 BM 73  6 16 2441850 37.7 N  95.6 E 27 325 33.  33
  93.7    342.9   7 22 48.0   7   9 28.4 11028 BM     73/06/16
 2441850   37.7 N   095.6 E   5.4
                33    93.7     342.9   07-22-48.0   07-09-28.
4   LDTDPWUQCE                                    27 SOUTH
ERN SINKIANG TO KANSU       325 TSINGHAI PROVINCE, CHINA

127 11028 F1 73  6 16 2441850 37.7 N  95.6 E 27 325 33.  33
  93.7    342.9   7 22 48.0   7   9 28.4 11028 F1     73/06/16
 2441850   37.7 N   095.6 E   5.4
                33    93.7     342.9   07-22-48.0   07-09-28.
4   LDTDPWUQCE                                    27 SOUTH
ERN SINKIANG TO KANSU       325 TSINGHAI PROVINCE, CHINA

127 11028 F2 73  6 16 2441850 37.7 N  95.6 E 27 325 33.  33
  93.7    342.9   7 22 48.0   7   9 28.4 11028 F2     73/06/16
 2441850   37.7 N   095.6 E   5.4
                33    93.7     342.9   07-22-48.0   07-09-28.
4   LDTDPWUQCE                                    27 SOUTH
ERN SINKIANG TO KANSU       325 TSINGHAI PROVINCE, CHINA
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127 11028 F3 73  6 16 2441850 37.7 N  95.6 E 27 325 33.  33
  93.7    342.9  7 22 48.0  7  9 28.4 11028 F3    73/06/16
 2441850    37.7 N   095.6 E   5.4
                   33     93.7    342.9   07-22-48.0   07-09-28.
4   LDTDPWUQCE                                       27 SOUTH
ERN SINKIANG TO KANSU        325 TSINGHAI PROVINCE, CHINA

127 11028 F4 73  6 16 2441850 37.7 N  95.6 E 27 325 33.  33
  93.7    342.9  7 22 48.0  7  9 28.4 11028 F4    73/06/16
 2441850    37.7 N   095.6 E   5.4
                   33     93.7    342.9   07-22-48.0   07-09-28.
4   LDTDPWUQCE                                       27 SOUTH
ERN SINKIANG TO KANSU        325 TSINGHAI PROVINCE, CHINA

128 11032 BM 73  6 17 2441851 43.2 N 145.8 E 19 224 48.  48
  70.1    312.4  3 55  2.0  3 43 46.1 11032 BM    73/06/17
 2441851    43.2 N   145.8 E   6.5
                   48     70.1    312.4   03-55-02.0   03-43-46.
1   LMEDJIZCKQ                                        19 JAPAN
 - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

128 11032 F1 73  6 17 2441851 43.2 N 145.8 E 19 224 48.  48
  70.1    312.4  3 55  2.0  3 43 46.1 11032 F1    73/06/17
 2441851    43.2 N   145.8 E   6.5
                   48     70.1    312.4   03-55-02.0   03-43-46.
1   LMEDJIZCKQ                                        19 JAPAN
 - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

128 11032 F2 73  6 17 2441851 43.2 N 145.8 E 19 224 48.  48
  70.1    312.4  3 55  2.0  3 43 46.1 11032 F2    73/06/17
 2441851    43.2 N   145.8 E   6.5
                   48     70.1    312.4   03-55-02.0   03-43-46.
1   LMEDJIZCKQ                                        19 JAPAN
 - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

128 11032 F3 73  6 17 2441851 43.2 N 145.8 E 19 224 48.  48
  70.1    312.4  3 55  2.0  3 43 46.1 11032 F3    73/06/17
 2441851    43.2 N   145.8 E   6.5
                   48     70.1    312.4   03-55-02.0   03-43-46.
1   LMEDJIZCKQ                                        19 JAPAN
 - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

128 11032 F4 73  6 17 2441851 43.2 N 145.8 E 19 224 48.  48
  70.1    312.4  3 55  2.0  3 43 46.1 11032 F4    73/06/17
 2441851    43.2 N   145.8 E   6.5
                   48     70.1    312.4   03-55-02.0   03-43-46.
1   LMEDJIZCKQ                                        19 JAPAN
 - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

129 11034 BM 73  6 24 2441858 43.3 N 146.4 E 19 221 50.  50
  69.7    312.1  2 43 25.0  2 32 11.6 11034 BM    73/06/24
 2441858    43.3 N   146.4 E   6.3
                   50     69.7    312.1   02-43-25.0   02-32-11.
6   LSCBCEKCYH                                        19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

129 11034 F1 73  6 24 2441858 43.3 N 146.4 E 19 221 50.  50
  69.7    312.1  2 43 25.0  2 32 11.6 11034 F1    73/06/24
 2441858    43.3 N   146.4 E   6.3
                   50     69.7    312.1   02-43-25.0   02-32-11.
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6   LSCBCEKQYH                                          19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

129 11034 F2 73  6 24 2441858 43.3 N 146.4 E 19 221 50.  50
  69.7    312.1  2 43 25.0  2 32 11.6 11034 F2     73/06/24
 2441858    43.3 N    146.4 E    6.3
                   50     69.7     312.1    02-43-25.0    02-32-11.
6   LSCBCEKQYH                                          19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

129 11034 F3 73  6 24 2441858 43.3 N 146.4 E 19 221 50.  50
  69.7    312.1  2 43 25.0  2 32 11.6 11034 F3     73/06/24
 2441858    43.3 N    146.4 E    6.3
                   50     69.7     312.1    02-43-25.0    02-32-11.
6   LSCBCEKQYH                                          19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

129 11034 F4 73  6 24 2441858 43.3 N 146.4 E 19 221 50.  50
  69.7    312.1  2 43 25.0  2 32 11.6 11034 F4     73/06/24
 2441858    43.3 N    146.4 E    6.3
                   50     69.7     312.1    02-43-25.0    02-32-11.
6   LSCBCEKQYH                                          19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

130 11095 BM 73  6 27 2441861 40.6 N  79.2 E 27 321 33.  33
  92.9    355.9 13 11 11.0 12 57 54.7 11095 BM     73/06/27
 2441861    40.6 N    079.2 E    5.0
                   33     92.9     355.9    13-11-11.0    12-57-54.
7   CVFLOMJUSQ                                          27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
NA
130 11095 F1 73  6 27 2441861 40.6 N  79.2 E 27 321 33.  33
  92.9    355.9 13 11 11.0 12 57 54.7 11095 F1     73/06/27
 2441861    40.6 N    079.2 E    5.0
                   33     92.9     355.9    13-11-11.0    12-57-54.
7   CVFLOMJUSQ                                          27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
NA
130 11095 F2 73  6 27 2441861 40.6 N  79.2 E 27 321 33.  33
  92.9    355.9 13 11 11.0 12 57 54.7 11095 F2     73/06/27
 2441861    40.6 N    079.2 E    5.0
                   33     92.9     355.9    13-11-11.0    12-57-54.
7   CVFLOMJUSQ                                          27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
NA
130 11095 F3 73  6 27 2441861 40.6 N  79.2 E 27 321 33.  33
  92.9    355.9 13 11 11.0 12 57 54.7 11095 F3     73/06/27
 2441861    40.6 N    079.2 E    5.0
                   33     92.9     355.9    13-11-11.0    12-57-54.
7   CVFLOMJUSQ                                          27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
NA
130 11095 F4 73  6 27 2441861 40.6 N  79.2 E 27 321 33.  33
  92.9    355.9 13 11 11.0 12 57 54.7 11095 F4     73/06/27
 2441861    40.6 N    079.2 E    5.0
                   33     92.9     355.9    13-11-11.0    12-57-54.
7   CVFLOMJUSQ                                          27 SOUTH
ERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CHI
NA
131 11105 BM 73  6 29 2441863 21.1 N 143.1 E 18 215 24.  24
```

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  88.1    299.1  2 23 20.0  2 10 26.3 11105 BM     73/06/29
 2441863   21.1 N    143.1 E    5.7
                 24     88.1     299.1   02-23-20.0   02-10-26.
3   QFULSYGTEH                                           18 GUAM
TO JAPAN                         215 MARIANA ISLANDS REGION

131 11105 F1 73  6 29 2441863 21.1 N 143.1 E 18 215 24.  24
  88.1    299.1  2 23 20.0  2 10 26.3 11105 F1     73/06/29
 2441863   21.1 N    143.1 E    5.7
                 24     88.1     299.1   02-23-20.0   02-10-26.
3   QFULSYGTEH                                           18 GUAM
TO JAPAN                         215 MARIANA ISLANDS REGION

131 11105 F2 73  6 29 2441863 21.1 N 143.1 E 18 215 24.  24
  88.1    299.1  2 23 20.0  2 10 26.3 11105 F2     73/06/29
 2441863   21.1 N    143.1 E    5.7
                 24     88.1     299.1   02-23-20.0   02-10-26.
3   QFULSYGTEH                                           18 GUAM
TO JAPAN                         215 MARIANA ISLANDS REGION

131 11105 F3 73  6 29 2441863 21.1 N 143.1 E 18 215 24.  24
  88.1    299.1  2 23 20.0  2 10 26.3 11105 F3     73/06/29
 2441863   21.1 N    143.1 E    5.7
                 24     88.1     299.1   02-23-20.0   02-10-26.
3   QFULSYGTEH                                           18 GUAM
TO JAPAN                         215 MARIANA ISLANDS REGION

131 11105 F4 73  6 29 2441863 21.1 N 143.1 E 18 215 24.  24
  88.1    299.1  2 23 20.0  2 10 26.3 11105 F4     73/06/29
 2441863   21.1 N    143.1 E    5.7
                 24     88.1     299.1   02-23-20.0   02-10-26.
3   QFULSYGTEH                                           18 GUAM
TO JAPAN                         215 MARIANA ISLANDS REGION

132 11042 BM 73  7  3 2441867 12.2 N 125.3 E 22 251 33.  33
 105.5    307.5  7  3 43.0  6 49 30.2 11042 BM     73/07/03
 2441867   12.2 N    125.3 E    6.1
                 33    105.5     307.5   07-03-43.0   06-49-30.
2   RZFKVZHQLU                                           22 PHILI
PPINES                           251 SAMAR, PHILIPPINE ISLANDS

132 11042 F1 73  7  3 2441867 12.2 N 125.3 E 22 251 33.  33
 105.5    307.5  7  3 43.0  6 49 30.2 11042 F1     73/07/03
 2441867   12.2 N    125.3 E    6.1
                 33    105.5     307.5   07-03-43.0   06-49-30.
2   RZFKVZHQLU                                           22 PHILI
PPINES                           251 SAMAR, PHILIPPINE ISLANDS

132 11042 F2 73  7  3 2441867 12.2 N 125.3 E 22 251 33.  33
 105.5    307.5  7  3 43.0  6 49 30.2 11042 F2     73/07/03
 2441867   12.2 N    125.3 E    6.1
                 33    105.5     307.5   07-03-43.0   06-49-30.
2   RZFKVZHQLU                                           22 PHILI
PPINES                           251 SAMAR, PHILIPPINE ISLANDS

132 11042 F3 73  7  3 2441867 12.2 N 125.3 E 22 251 33.  33
 105.5    307.5  7  3 43.0  6 49 30.2 11042 F3     73/07/03
 2441867   12.2 N    125.3 E    6.1
                 33    105.5     307.5   07-03-43.0   06-49-30.
2   RZFKVZHQLU                                           22 PHILI
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PPINES                                251 SAMAR, PHILIPPINE ISLANDS

132 11042 F4 73  7  3 2441867 12.2 N 125.3 E 22 251 33.  33
  105.5    307.5  7  3 43.0  6 49 30.2 11042 F4     73/07/03
 2441867   12.2 N    125.3 E    6.1
                  33    105.5    307.5   07-03-43.0   06-49-30.
2   RZFKVZHGLU                                          22 PHILI
PPINES                                251 SAMAR, PHILIPPINE ISLANDS

133 11038 BM 73  7  1 2441865 57.8 N-137.3 W  2  20 33.  33
  21.8    312.1 13 33 34.0 13 28 38.0 11038 BM     73/07/01
 2441865   57.8 N    137.3 W    6.1
                  33     21.8    312.1   13-33-34.0   13-28-38.
0   FYSWULRQUP                                          2 EASTE
RN ALASKA TO VANCOUVER ISLA  20 OFF COAST OF SOUTHEASTERN AL
ASKA
133 11038 F1 73  7  1 2441865 57.8 N-137.3 W  2  20 33.  33
  21.8    312.1 13 33 34.0 13 28 38.0 11038 F1     73/07/01
 2441865   57.8 N    137.3 W    6.1
                  33     21.8    312.1   13-33-34.0   13-28-38.
0   FYSWULRQUP                                          2 EASTE
RN ALASKA TO VANCOUVER ISLA  20 OFF COAST OF SOUTHEASTERN AL
ASKA
133 11038 F2 73  7  1 2441865 57.8 N-137.3 W  2  20 33.  33
  21.8    312.1 13 33 34.0 13 28 38.0 11038 F2     73/07/01
 2441865   57.8 N    137.3 W    6.1
                  33     21.8    312.1   13-33-34.0   13-28-38.
0   FYSWULRQUP                                          2 EASTE
RN ALASKA TO VANCOUVER ISLA  20 OFF COAST OF SOUTHEASTERN AL
ASKA
133 11038 F3 73  7  1 2441865 57.8 N-137.3 W  2  20 33.  33
  21.8    312.1 13 33 34.0 13 28 38.0 11038 F3     73/07/01
 2441865   57.8 N    137.3 W    6.1
                  33     21.8    312.1   13-33-34.0   13-28-38.
0   FYSWULRQUP                                          2 EASTE
RN ALASKA TO VANCOUVER ISLA  20 OFF COAST OF SOUTHEASTERN AL
ASKA
133 11038 F4 73  7  1 2441865 57.8 N-137.3 W  2  20 33.  33
  21.8    312.1 13 33 34.0 13 28 38.0 11038 F4     73/07/01
 2441865   57.8 N    137.3 W    6.1
                  33     21.8    312.1   13-33-34.0   13-28-38.
0   FYSWULRQUP                                          2 EASTE
RN ALASKA TO VANCOUVER ISLA  20 OFF COAST OF SOUTHEASTERN AL
ASKA
134 11039 BM 73  7  2 2441866 49.5 N -28.5 W 32 403 33.  33
  49.8     56.4  1  4 55.0  0 55 58.7 11039 BM     73/07/02
 2441866   49.5 N    028.5 W    5.0
                  33     49.8     56.4   01-04-55.0   00-55-58.
7   IEOPLQYPRV                                          32 ATLAN
TIC OCEAN                            403 NORTH ATLANTIC RIDGE

134 11039 F1 73  7  2 2441866 49.5 N -28.5 W 32 403 33.  33
  49.8     56.4  1  4 55.0  0 55 58.7 11039 F1     73/07/02
 2441866   49.5 N    028.5 W    5.0
                  33     49.8     56.4   01-04-55.0   00-55-58.
7   IEOPLQYPRV                                          32 ATLAN
TIC OCEAN                            403 NORTH ATLANTIC RIDGE

134 11039 F2 73  7  2 2441866 49.5 N -28.5 W 32 403 33.  33
  49.8     56.4  1  4 55.0  0 55 58.7 11039 F2     73/07/02
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 2441866    49.5 N    028.5 W    5.0
                  33      49.8      56.4   01-04-55.0    00-55-58.
7   IEOPLGYPPV                                          32 ATLAN
TIC OCEAN                      403 NORTH ATLANTIC RIDGE

134 11039 F3 73  7  2 2441866 49.5 N -28.5 W 32 403 33.  33
  49.8    56.4  1  4 55.0  0 55 58.7 11039 F3    73/07/02
 2441866    49.5 N    028.5 W    5.0
                  33      49.8      56.4   01-04-55.0    00-55-58.
7   IEOPLQYPPV                                          32 ATLAN
TIC OCEAN                      403 NORTH ATLANTIC RIDGE

134 11039 F4 73  7  2 2441866 49.5 N -28.5 W 32 403 33.  33
  49.8    56.4  1  4 55.0  0 55 58.7 11039 F4    73/07/02
 2441866    49.5 N    028.5 W    5.0
                  33      49.8      56.4   01-04-55.0    00-55-58.
7   IEOPLQYPPV                                          32 ATLAN
TIC OCEAN                      403 NORTH ATLANTIC RIDGE

135 11040 BM 73  7  2 2441866 54.0 N 164.1 E 28 326 33.  33
  54.0   313.2  5 56 12.0  5 46 44.2 11040 BM    73/07/02
 2441866    54.0 N    164.1 E    5.4
                  33      54.0     313.2   05-56-12.0    05-46-44.
2   DJBOJBLQCZ                                          28 ALMA-
ATA TO LAKE BAIKAL             326 CENTRAL RUSSIA

135 11040 F1 73  7  2 2441866 54.0 N 164.1 E 28 326 33.  33
  54.0   313.2  5 56 12.0  5 46 44.2 11040 F1    73/07/02
 2441866    54.0 N    164.1 E    5.4
                  33      54.0     313.2   05-56-12.0    05-46-44.
2   DJBOJBLQCZ                                          28 ALMA-
ATA TO LAKE BAIKAL             326 CENTRAL RUSSIA

135 11040 F2 73  7  2 2441866 54.0 N 164.1 E 28 326 33.  33
  54.0   313.2  5 56 12.0  5 46 44.2 11040 F2    73/07/02
 2441866    54.0 N    164.1 E    5.4
                  33      54.0     313.2   05-56-12.0    05-46-44.
2   DJBOJBLQCZ                                          28 ALMA-
ATA TO LAKE BAIKAL             326 CENTRAL RUSSIA

135 11040 F3 73  7  2 2441866 54.0 N 164.1 E 28 326 33.  33
  54.0   313.2  5 56 12.0  5 46 44.2 11040 F3    73/07/02
 2441866    54.0 N    164.1 E    5.4
                  33      54.0     313.2   05-56-12.0    05-46-44.
2   DJBOJBLQCZ                                          28 ALMA-
ATA TO LAKE BAIKAL             326 CENTRAL RUSSIA

135 11040 F4 73  7  2 2441866 54.0 N 164.1 E 28 326 33.  33
  54.0   313.2  5 56 12.0  5 46 44.2 11040 F4    73/07/02
 2441866    54.0 N    164.1 E    5.4
                  33      54.0     313.2   05-56-12.0    05-46-44.
2   DJBOJBLQCZ                                          28 ALMA-
ATA TO LAKE BAIKAL             326 CENTRAL RUSSIA

136 11043 BM 73  7  3 2441867 44.1 N  13.3 E 31 382 47.  47
  75.0    40.4 16 10 12.0 15 58 27.2 11043 BM    73/07/03
 2441867    44.1 N    013.3 E    5.3
                  47      75.0      40.4   16-10-12.0    15-58-27.
2   YYRITUQPLC                                          31 WESTE
RN MEDITERRANEAN AREA          382 ADRIATIC SEA
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136 11043 F1 73  7  3 2441867 44.1 N  13.3 E 31 382 47.  47
  75.0     40.4 16 10 12.0 15 58 27.2 11043 F1     73/07/03
 2441867   44.1 N   013.3 F   5.3
                47     75.0     40.4   16-10-12.0   15-58-27.
2   YYRITUQPLC                                       31 WESTE
RN MEDITERRANEAN AREA        382 ADRIATIC SEA

136 11043 F2 73  7  3 2441867 44.1 N  13.3 E 31 382 47.  47
  75.0     40.4 16 10 12.0 15 58 27.2 11043 F2     73/07/03
 2441867   44.1 N   013.3 E   5.3
                47     75.0     40.4   16-10-12.0   15-58-27.
2   YYRITUQPLC                                       31 WESTE
RN MEDITERRANEAN AREA        382 ADRIATIC SEA

136 11043 F3 73  7  3 2441867 44.1 N  13.3 E 31 382 47.  47
  75.0     40.4 16 10 12.0 15 58 27.2 11043 F3     73/07/03
 2441867   44.1 N   013.3 E   5.3
                47     75.0     40.4   16-10-12.0   15-58-27.
2   YYRITUQPLC                                       31 WESTE
RN MEDITERRANEAN AREA        382 ADRIATIC SEA

136 11043 F4 73  7  3 2441867 44.1 N  13.3 E 31 382 47.  47
  75.0     40.4 16 10 12.0 15 58 27.2 11043 F4     73/07/03
 2441867   44.1 N   013.3 F   5.3
                47     75.0     40.4   16-10-12.0   15-58-27.
2   YYRITUQPLC                                       31 WESTE
RN MEDITERRANEAN AREA        382 ADRIATIC SEA

137 11047 BM 73  7  9 2441873 10.7 N  92.6 E 46 703 46.  46
 120.4    338.5 16 19 46.0 16  4 30.5 11047 BM     73/07/09
 2441873   10.7 N   092.6 F   5.7
                46    120.4    338.5   16-19-46.0   16-04-30.
5   KMQHSFTFLZ                                       46 ANDAM
AN ISLANDS TO SUMATRA        703 ANDAMAN ISLANDS REGION

137 11047 F1 73  7  9 2441873 10.7 N  92.6 E 46 703 46.  46
 120.4    338.5 16 19 46.0 16  4 30.5 11047 F1     73/07/09
 2441873   10.7 N   092.6 E   5.7
                46    120.4    338.5   16-19-46.0   16-04-30.
5   KMQHSFTFLZ                                       46 ANDAM
AN ISLANDS TO SUMATRA        703 ANDAMAN ISLANDS REGION

137 11047 F2 73  7  9 2441873 10.7 N  92.6 E 46 703 46.  46
 120.4    338.5 16 19 46.0 16  4 30.5 11047 F2     73/07/09
 2441873   10.7 N   092.6 E   5.7
                46    120.4    338.5   16-19-46.0   16-04-30.
5   KMQHSFTFLZ                                       46 ANDAM
AN ISLANDS TO SUMATRA        703 ANDAMAN ISLANDS REGION

137 11047 F3 73  7  9 2441873 10.7 N  92.6 E 46 703 46.  46
 120.4    338.5 16 19 46.0 16  4 30.5 11047 F3     73/07/09
 2441873   10.7 N   092.6 E   5.7
                46    120.4    338.5   16-19-46.0   16-04-30.
5   KMQHSFTFLZ                                       46 ANDAM
AN ISLANDS TO SUMATRA        703 ANDAMAN ISLANDS REGION

137 11047 F4 73  7  9 2441873 10.7 N  92.6 E 46 703 46.  46
 120.4    338.5 16 19 46.0 16  4 30.5 11047 F4     73/07/09
 2441873   10.7 N   092.6 E   5.7
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                    46    120.4     338.5    16-19-46.0    16-04-30.
5    KMQHSFTFLZ                                             46 ANDAM
AN ISLANDS TO SUMATRA         703 ANDAMAN ISLANDS REGION

138 11051 BM 73  7 10 2441874 37.5 N 142.5 E 19 229 45.  45
  76.0   310.3 23 25 31.0 23 13 39.9 11051 BM    73/07/10
 2441874   37.5 N   142.5 E    5.2
                    45     76.0     310.3    23-25-31.0    23-13-39.
9    ZLSFITCGSY                                             19 JAPAN
 - KURILES - KAMCHATKA        229 OFF EAST COAST OF HONSHU, JA
PAN
138 11051 F1 73  7 10 2441874 37.5 N 142.5 E 19 229 45.  45
  76.0   310.3 23 25 31.0 23 13 39.9 11051 F1    73/07/10
 2441874   37.5 N   142.5 E    5.2
                    45     76.0     310.3    23-25-31.0    23-13-39.
9    ZLSFITCGSY                                             19 JAPAN
 - KURILES - KAMCHATKA        229 OFF EAST COAST OF HONSHU, JA
PAN
138 11051 F2 73  7 10 2441874 37.5 N 142.5 E 19 229 45.  45
  76.0   310.3 23 25 31.0 23 13 39.9 11051 F2    73/07/10
 2441874   37.5 N   142.5 E    5.2
                    45     76.0     310.3    23-25-31.0    23-13-39.
9    ZLSFITCGSY                                             19 JAPAN
 - KURILES - KAMCHATKA        229 OFF EAST COAST OF HONSHU, JA
PAN
138 11051 F3 73  7 10 2441874 37.5 N 142.5 E 19 229 45.  45
  76.0   310.3 23 25 31.0 23 13 39.9 11051 F3    73/07/10
 2441874   37.5 N   142.5 E    5.2
                    45     76.0     310.3    23-25-31.0    23-13-39.
9    ZLSFITCGSY                                             19 JAPAN
 - KURILES - KAMCHATKA        229 OFF EAST COAST OF HONSHU, JA
PAN
138 11051 F4 73  7 10 2441874 37.5 N 142.5 E 19 229 45.  45
  76.0   310.3 23 25 31.0 23 13 39.9 11051 F4    73/07/10
 2441874   37.5 N   142.5 E    5.2
                    45     76.0     310.3    23-25-31.0    23-13-39.
9    ZLSFITCGSY                                             19 JAPAN
 - KURILES - KAMCHATKA        229 OFF EAST COAST OF HONSHU, JA
PAN
139 11080 BM 73  7 11 2441875 52.0 N-176.1 W  1    7 63.  63
  44.2   303.8 23 23 11.0 23 14 58.3 11080 BM    73/07/11
 2441875   52.0 N   176.1 W    5.1
                    63     44.2     303.8    23-23-11.0    23-14-58.
3    HMLCSKKURQ                                              1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
139 11080 F1 73  7 11 2441875 52.0 N-176.1 W  1    7 63.  63
  44.2   303.8 23 23 11.0 23 14 58.3 11080 F1    73/07/11
 2441875   52.0 N   176.1 W    5.1
                    63     44.2     303.8    23-23-11.0    23-14-58.
3    HMLCSKKURQ                                              1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
139 11080 F2 73  7 11 2441875 52.0 N-176.1 W  1    7 63.  63
  44.2   303.8 23 23 11.0 23 14 58.3 11080 F2    73/07/11
 2441875   52.0 N   176.1 W    5.1
                    63     44.2     303.8    23-23-11.0    23-14-58.
3    HMLCSKKURQ                                              1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
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139 11080 F3 73  7 11 2441875 52.0 N-176.1 W  1    7 63.  63
  44.2    303.8 23 23 11.0 23 14 58.3 11080 F3     73/07/11
 2441875    52.0 N    176.1 W    5.1
                   63     44.2    303.8   23-23-11.0   23-14-58.
3   HMLCSKKURQ                                             1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
139 11080 F4 73  7 11 2441875 52.0 N-176.1 W  1    7 63.  63
  44.2    303.8 23 23 11.0 23 14 58.3 11080 F4     73/07/11
 2441875    52.0 N    176.1 W    5.1
                   63     44.2    303.8   23-23-11.0   23-14-58.
3   HMLCSKKURQ                                             1 ALASK
A - ALEUTIAN ARC                  7 ANDREANOF ISLANDS, ALEUTIAN
IS.
140 11052 BM 73  7 12 2441876 52.2 N 174.2 E  1    5 47.  47
  49.6    307.4  7 51  7.0  7 42 12.6 11052 BM     73/07/12
 2441876    52.2 N    174.2 E    5.2
                   47     49.6    307.4   07-51-07.0   07-42-12.
6   OGQGLUIHRB                                             1 ALASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
140 11052 F1 73  7 12 2441876 52.2 N 174.2 E  1    5 47.  47
  49.6    307.4  7 51  7.0  7 42 12.6 11052 F1     73/07/12
 2441876    52.2 N    174.2 E    5.2
                   47     49.6    307.4   07-51-07.0   07-42-12.
6   OGQGLUIHRB                                             1 ALASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
140 11052 F2 73  7 12 2441876 52.2 N 174.2 E  1    5 47.  47
  49.6    307.4  7 51  7.0  7 42 12.6 11052 F2     73/07/12
 2441876    52.2 N    174.2 E    5.2
                   47     49.6    307.4   07-51-07.0   07-42-12.
6   OGQGLUIHRB                                             1 ALASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
140 11052 F3 73  7 12 2441876 52.2 N 174.2 E  1    5 47.  47
  49.6    307.4  7 51  7.0  7 42 12.6 11052 F3     73/07/12
 2441876    52.2 N    174.2 E    5.2
                   47     49.6    307.4   07-51-07.0   07-42-12.
6   OGQGLUIHRB                                             1 ALASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
140 11052 F4 73  7 12 2441876 52.2 N 174.2 E  1    5 47.  47
  49.6    307.4  7 51  7.0  7 42 12.6 11052 F4     73/07/12
 2441876    52.2 N    174.2 E    5.2
                   47     49.6    307.4   07-51-07.0   07-42-12.
6   OGQGLUIHRB                                             1 ALASK
A - ALEUTIAN ARC                  5 NEAR ISLANDS, ALEUTIAN ISLAN
DS
141 11056 BM 73  7 14 2441878 35.2 N  86.5 E 26 306 33.  33
  97.6    349.5  4 51 21.0  4 37 43.6 11056 BM     73/07/14
 2441878    35.2 N    086.5 E    6.0
                   33     97.6    349.5   04-51-21.0   04-37-43.
6   TQLZWBJHBM                                            26 INDIA
 - TIBET - SZECHWAN - YUNAN 306 TIBET

141 11056 F1 73  7 14 2441878 35.2 N  86.5 E 26 306 33.  33
  97.6    349.5  4 51 21.0  4 37 43.6 11056 F1     73/07/14
 2441878    35.2 N    086.5 E    6.0
                   33     97.6    349.5   04-51-21.0   04-37-43.
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6   IQLZWBJHBM                                            26 INDIA
 - TIBET - SZECHWAN - YUNAN 306 TIBET

141 11056 F2 73  7 14 2441878 35.2 N  86.5 E 26 306 33.  33
  97.6    349.5  4 51 21.0  4 37 43.6 11056 F2     73/07/14
 2441878    35.2 N    086.5 E    6.0
                  33      97.6      349.5    04-51-21.0    04-37-43.
6   IQLZWBJHBM                                            26 INDIA
 - TIBET - SZECHWAN - YUNAN 306 TIBET

141 11056 F3 73  7 14 2441878 35.2 N  86.5 E 26 306 33.  33
  97.6    349.5  4 51 21.0  4 37 43.6 11056 F3     73/07/14
 2441878    35.2 N    086.5 E    6.0
                  33      97.6      349.5    04-51-21.0    04-37-43.
6   IQLZWBJHBM                                            26 INDIA
 - TIBET - SZECHWAN - YUNAN 306 TIBET

141 11056 F4 73  7 14 2441878 35.2 N  86.5 E 26 306 33.  33
  97.6    349.5  4 51 21.0  4 37 43.6 11056 F4     73/07/14
 2441878    35.2 N    086.5 E    6.0
                  33      97.6      349.5    04-51-21.0    04-37-43.
6   IQLZWBJHBM                                            26 INDIA
 - TIBET - SZECHWAN - YUNAN 306 TIBET

142 11059 BM 73  7 15 2441879 43.4 N 146.5 E 19 221 43.  43
  69.6    312.2 14  6 49.0 13 55 36.2 11059 BM     73/07/15
 2441879    43.4 N    146.5 E    5.4
                  43      69.6      312.2    14-06-49.0    13-55-36.
2   ZQBLIOVDPW                                            19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

142 11059 F1 73  7 15 2441879 43.4 N 146.5 E 19 221 43.  43
  69.6    312.2 14  6 49.0 13 55 36.2 11059 F1     73/07/15
 2441879    43.4 N    146.5 E    5.4
                  43      69.6      312.2    14-06-49.0    13-55-36.
2   ZQBLIOVDPW                                            19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

142 11059 F2 73  7 15 2441879 43.4 N 146.5 E 19 221 43.  43
  69.6    312.2 14  6 49.0 13 55 36.2 11059 F2     73/07/15
 2441879    43.4 N    146.5 E    5.4
                  43      69.6      312.2    14-06-49.0    13-55-36.
2   ZQBLIOVDPW                                            19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

142 11059 F3 73  7 15 2441879 43.4 N 146.5 E 19 221 43.  43
  69.6    312.2 14  6 49.0 13 55 36.2 11059 F3     73/07/15
 2441879    43.4 N    146.5 E    5.4
                  43      69.6      312.2    14-06-49.0    13-55-36.
2   ZQBLIOVDPW                                            19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

142 11059 F4 73  7 15 2441879 43.4 N 146.5 E 19 221 43.  43
  69.6    312.2 14  6 49.0 13 55 36.2 11059 F4     73/07/15
 2441879    43.4 N    146.5 E    5.4
                  43      69.6      312.2    14-06-49.0    13-55-36.
2   ZQBLIOVDPW                                            19 JAPAN
 - KURILES - KAMCHATKA       221 KURILE ISLANDS

143 11061 BM 73  7 16 2441880 17.3 N-100.7 W  5  58 44.  44
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  29.7     169.3 18 12 57.0 18   6 46.9 11061 BM      73/07/16
 2441880    17.3 N    100.7 W    5.6
                   44      29.7      169.3    18-12-57.0    18-06-46.
9    SBHWCLWMQR                                               5 MEXIC
0 - GUATEMALA AREA              58 NEAR COAST OF GUERRERO, MEXI
CO
143 11061 F1 73   7 16 2441880 17.3 N-100.7 W   5   58 44.   44
  29.7     169.3 18 12 57.0 18   6 46.9 11061 F1      73/07/16
 2441880    17.3 N    100.7 W    5.6
                   44      29.7      169.3    18-12-57.0    18-06-46.
9    SBHWCLWMQR                                               5 MEXIC
0 - GUATEMALA AREA              58 NEAR COAST OF GUERRERO, MEXI
CO
143 11061 F2 73   7 16 2441880 17.3 N-100.7 W   5   58 44.   44
  29.7     169.3 18 12 57.0 18   6 46.9 11061 F2      73/07/16
 2441880    17.3 N    100.7 W    5.6
                   44      29.7      169.3    18-12-57.0    18-06-46.
9    SBHWCLWMQR                                               5 MEXIC
0 - GUATEMALA AREA              58 NEAR COAST OF GUERRERO, MEXI
CO
143 11061 F3 73   7 16 2441880 17.3 N-100.7 W   5   58 44.   44
  29.7     169.3 18 12 57.0 18   6 46.9 11061 F3      73/07/16
 2441880    17.3 N    100.7 W    5.6
                   44      29.7      169.3    18-12-57.0    18-06-46.
9    SBHWCLWMQR                                               5 MEXIC
0 - GUATEMALA AREA              58 NEAR COAST OF GUERRERO, MEXI
CO
143 11061 F4 73   7 16 2441880 17.3 N-100.7 W   5   58 44.   44
 29.7    169.3 18 12 57.0 18   6 46.9 11061 F4     73/07/16
2441880    17.3 N    100.7 W    5.6
                  44      29.7      169.3    18-12-57.0    18-06-46.9
  SBHWCLWMQR                                                5 MEXICO
 - GUATEMALA AREA               58 NEAR COAST OF GUERRERO, MEXIC
O
144 11067 BM 73   7 20 2441884 80.0 N      .2 E 40 641 33.   33
 47.1      13.2 23 27 48.0 23 19 12.2 11067 BM      73/07/20
2441884    80.0 N    0  .2 E    5.2
                 33      47.1       13.2    23-27-48.0    23-19-12.2
  KQERIVLIPF                                                40 ARCTIC
 ZONE                            641 NORTH OF SVALBARD

144 11067 F1 73   7 20 2441884 80.0 N      .2 E 40 641 33.   33
 47.1      13.2 23 27 48.0 23 19 12.2 11067 F1      73/07/20
2441884    80.0 N    0  .2 E    5.2
                 33      47.1       13.2    23-27-48.0    23-19-12.2
  KQERIVLIPF                                                40 ARCTIC
 ZONE                            641 NORTH OF SVALBARD

144 11067 F2 73   7 20 2441884 80.0 N      .2 E 40 641 33.   33
 47.1      13.2 23 27 48.0 23 19 12.2 11067 F2      73/07/20
2441884    80.0 N    0  .2 E    5.2
                 33      47.1       13.2    23-27-48.0    23-19-12.2
  KQERIVLIPF                                                40 ARCTIC
 ZONE                            641 NORTH OF SVALBARD

144 11067 F3 73   7 20 2441884 80.0 N      .2 E 40 641 33.   33
 47.1      13.2 23 27 48.0 23 19 12.2 11067 F3      73/07/20
2441884    80.0 N    0  .2 E    5.2
                 33      47.1       13.2    23-27-48.0    23-19-12.2
  KQERIVLIPF                                                40 ARCTIC
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    ZONE                              641 NORTH OF SVALBARD

144 11067 F4 73  7 20 2441884 80.0 N     .2 E 40 641 33.  33
 47.1     13.2 23 27 48.0 23 19 12.2 11067 F4     73/07/20
2441884   80.0 N    0  .2 E    5.2
                 33     47.1      13.2   23-27-48.0   23-19-12.2
   KQERIVLIPE                                          40 ARCTIC
 ZONE                              641 NORTH OF SVALBARD

145 12303 BM 74  1 30 2442078 49.8 N  78.1 E 28 329  0.    0
 83.7    357.2  4 57  2.0  4 44 29.7 12303 BM     74/01/30
2442078   49.8 N    078.1 E    5.5
                  0     83.7     357.2   04-57-02.0   04-44-29.7
   ZXHLRUJZYM                                          28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

145 12303 D1 74  1 30 2442078 49.8 N  78.1 E 28 329  0.    0
 83.7    357.2  4 57  2.0  4 44 29.7 12303 D1     74/01/30
2442078   49.8 N    078.1 E    5.5
                  0     83.7     357.2   04-57-02.0   04-44-29.7
   ZXHLRUJZYM                                          28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

145 12303 D2 74  1 30 2442078 49.8 N  78.1 E 28 329  0.    0
 83.7    357.2  4 57  2.0  4 44 29.7 12303 D2     74/01/30
2442078   49.8 N    078.1 E    5.5
                  0     83.7     357.2   04-57-02.0   04-44-29.7
   ZXHLRUJZYM                                          28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

145 12303 D3 74  1 30 2442078 49.8 N  78.1 E 28 329  0.    0
 83.7    357.2  4 57  2.0  4 44 29.7 12303 D3     74/01/30
2442078   49.8 N    078.1 E    5.5
                  0     83.7     357.2   04-57-02.0   04-44-29.7
   ZXHLRUJZYM                                          28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

145 12303 D4 74  1 30 2442078 49.8 N  78.1 E 28 329  0.    0
 83.7    357.2  4 57  2.0  4 44 29.7 12303 D4     74/01/30
2442078   49.8 N    078.1 E    5.5
                  0     83.7     357.2   04-57-02.0   04-44-29.7
   ZXHLRUJZYM                                          28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

146 12474 BM 74  4 16 2442154 50.0 N  78.8 E 28 329  0.    0
 83.5    356.8  5 53  1.0  5 40 30.0 12474 BM     74/04/16
2442154   50.0 N    078.8 E    4.8
                  0     83.5     356.8   05-53-01.0   05-40-30.0
   OXJLOODVCF                                          28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

146 12474 D1 74  4 16 2442154 50.0 N  78.8 E 28 329  0.    0
 83.5    356.8  5 53  1.0  5 40 30.0 12474 D1     74/04/16
2442154   50.0 N    078.8 E    4.8
                  0     83.5     356.8   05-53-01.0   05-40-30.0
   OXJLOODVCF                                          28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

146 12474 D2 74  4 16 2442154 50.0 N  78.8 E 28 329  0.    0
 83.5    356.8  5 53  1.0  5 40 30.0 12474 D2     74/04/16
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2442154    50.0 N    078.8 E    4.8
                0      83.5     356.8    05-53-01.0    05-40-30.0
   OXJLOODVCF                                           28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

146 12474 D3 74  4 16 2442154 50.0 N  78.8 E 28 329  0.   0
 83.5   356.8  5 53  1.0  5 40 30.0 12474 D3    74/04/16
2442154    50.0 N    078.8 E    4.8
                0      83.5     356.8    05-53-01.0    05-40-30.0
   OXJLOODVCF                                           28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

146 12474 D4 74  4 16 2442154 50.0 N  78.8 E 28 329  0.   0
 83.5   356.8  5 53  1.0  5 40 30.0 12474 D4    74/04/16
2442154    50.0 N    078.8 E    4.8
                0      83.5     356.8    05-53-01.0    05-40-30.0
   OXJLOODVCF                                           28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

147 12305 BM 74  5 16 2442184 49.7 N  78.2 E 28 329  0.   0
 83.8   357.1  3  2 57.0  2 50 24.0 12305 BM    74/05/16
2442184    49.7 N    078.2 E    5.3
                0      83.8     357.1    03-02-57.0    02-50-24.0
   LXKIBYVPMJ                                           28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

147 12305 D1 74  5 16 2442184 49.7 N  78.2 E 28 329  0.   0
 83.8   357.1  3  2 57.0  2 50 24.0 12305 D1    74/05/16
2442184    49.7 N    078.2 E    5.3
                0      83.8     357.1    03-02-57.0    02-50-24.0
   LXKIBYVPMJ                                           28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

147 12305 D2 74  5 16 2442184 49.7 N  78.2 E 28 329  0.   0
 83.8   357.1  3  2 57.0  2 50 24.0 12305 D2    74/05/16
2442184    49.7 N    078.2 E    5.3
                0      83.8     357.1    03-02-57.0    02-50-24.0
   LXKIBYVPMJ                                           28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

147 12305 D3 74  5 16 2442184 49.7 N  78.2 E 28 329  0.   0
 83.8   357.1  3  2 57.0  2 50 24.0 12305 D3    74/05/16
2442184    49.7 N    078.2 E    5.3
                0      83.8     357.1    03-02-57.0    02-50-24.0
   LXKIBYVPMJ                                           28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

147 12305 D4 74  5 16 2442184 49.7 N  78.2 E 28 329  0.   0
 83.8   357.1  3  2 57.0  2 50 24.0 12305 D4    74/05/16
2442184    49.7 N    078.2 E    5.3
                0      83.8     357.1    03-02-57.0    02-50-24.0
   LXKIBYVPMJ                                           28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR

148 12399 BM 74  5 31 2442199 50.0 N  78.8 E 28 329  0.   0
 83.5   356.8  3 26 57.0  3 14 26.0 12399 BM    74/05/31
2442199    50.0 N    078.8 E    5.9
                0      83.5     356.8    03-26-57.0    03-14-26.0
   GRXUUMRTJL                                           28 ALMA-A
TA TO LAKE BAIKAL              329 EASTERN KAZAKH SSR
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148 12399 D1 74  5 31 2442199 50.0 N  78.8 E 28 329  0.   0
 83.5   356.8  3 26 57.0  3 14 26.0 12399 D1    74/05/31
2442199   50.0 N   078.8 E   5.9
                 0    83.5    356.8   03-26-57.0   03-14-26.0
   GRXUUMRTJL                                        28 ALMA-A
TA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

148 12399 D2 74  5 31 2442199 50.0 N  78.8 E 28 329  0.   0
 83.5   356.8  3 26 57.0  3 14 26.0 12399 D2    74/05/31
2442199   50.0 N   078.8 E   5.9
                 0    83.5    356.8   03-26-57.0   03-14-26.0
   GRXUUMRTJL                                        28 ALMA-A
TA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

148 12399 D3 74  5 31 2442199 50.0 N  78.8 E 28 329  0.   0
 83.5   356.8  3 26 57.0  3 14 26.0 12399 D3    74/05/31
2442199   50.0 N   078.8 E   5.9
                 0    83.5    356.8   03-26-57.0   03-14-26.0
   GRXUUMRTJL                                        28 ALMA-A
TA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

148 12399 D4 74  5 31 2442199 50.0 N  78.8 E 28 329  0.   0
 83.5   356.8  3 26 57.0  3 14 26.0 12399 D4    74/05/31
2442199   50.0 N   078.8 E   5.9
                 0    83.5    356.8   03-26-57.0   03-14-26.0
   GRXUUMRTJL                                        28 ALMA-A
TA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

149 12309 BM 74  6 25 2442224 49.9 N  78.1 E 28 329  0.   0
 83.6   357.2  3 56 57.0  3 44 25.2 12309 BM    74/06/25
2442224   49.9 N   078.1 E   4.7
                 0    83.6    357.2   03-56-57.0   03-44-25.2
   XYOLPOSVBY                                        28 ALMA-A
TA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

149 12309 D1 74  6 25 2442224 49.9 N  78.1 E 28 329  0.   0
 83.6   357.2  3 56 57.0  3 44 25.2 12309 D1    74/06/25
2442224   49.9 N   078.1 E   4.7
                 0    83.6    357.2   03-56-57.0   03-44-25.2
   XYOLPOSVBY                                        28 ALMA-A
TA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

149 12309 D2 74  6 25 2442224 49.9 N  78.1 E 28 329  0.   0
 83.6   357.2  3 56 57.0  3 44 25.2 12309 D2    74/06/25
2442224   49.9 N   078.1 E   4.7
                 0    83.6    357.2   03-56-57.0   03-44-25.2
   XYOLPOSVBY                                        28 ALMA-A
TA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

149 12309 D3 74  6 25 2442224 49.9 N  78.1 E 28 329  0.   0
 83.6   357.2  3 56 57.0  3 44 25.2 12309 D3    74/06/25
2442224   49.9 N   078.1 E   4.7
                 0    83.6    357.2   03-56-57.0   03-44-25.2
   XYOLPOSVBY                                        28 ALMA-A
TA TO LAKE BAIKAL           329 EASTERN KAZAKH SSR

149 12309 D4 74  6 25 2442224 49.9 N  78.1 E 28 329  0.   0
 83.6   357.2  3 56 57.0  3 44 25.2 12309 D4    74/06/25
2442224   49.9 N   078.1 E   4.7
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                  0     83.6     357.2   03-56-57.0   03-44-25.2
   XYOLPOSVBY                                          28 ALMA-A
TA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

150 12284 BM 74  7 10 2442239 49.8 N  78.1 E 28 329  0.    0
 83.7   357.2  2 56 57.0  2 44 24.7 12284 BM     74/07/10
2442239   49.8 N   078.1 E   5.3
                  0     83.7     357.2   02-56-57.0   02-44-24.7
   OXWYESELGT                                          28 ALMA-A
TA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

150 12284 D1 74  7 10 2442239 49.8 N  78.1 E 28 329  0.    0
 83.7   357.2  2 56 57.0  2 44 24.7 12284 D1     74/07/10
2442239   49.8 N   078.1 E   5.3
                  0     83.7     357.2   02-56-57.0   02-44-24.7
   OXWYESELGT                                          28 ALMA-A
TA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

150 12284 D2 74  7 10 2442239 49.8 N  78.1 E 28 329  0.    0
 83.7   357.2  2 56 57.0  2 44 24.7 12284 D2     74/07/10
2442239   49.8 N   078.1 E   5.3
                  0     83.7     357.2   02-56-57.0   02-44-24.7
   OXWYESELGT                                          28 ALMA-A
TA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

150 12284 D3 74  7 10 2442239 49.8 N  78.1 E 28 329  0.    0
 83.7   357.2  2 56 57.0  2 44 24.7 12284 D3     74/07/10
2442239   49.8 N   078.1 E   5.3
                  0     83.7     357.2   02-56-57.0   02-44-24.7
   OXWYESELGT                                          28 ALMA-A
TA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR

150 12284 D4 74  7 10 2442239 49.8 N  78.1 E 28 329  0.    0
 83.7   357.2  2 56 57.0  2 44 24.7 12284 D4     74/07/10
2442239   49.8 N   078.1 E   5.3
                  0     83.7     357.2   02-56-57.0   02-44-24.7
   OXWYESELGT                                          28 ALMA-A
TA TO LAKE BAIKAL             329 EASTERN KAZAKH SSR


151 12286 BM 74  7 10 2442239 37.8 N-116.0 W  3  40  0.    0
11.4   222.6 16  0  0.0 15 57 12.2 12286 BM     74/07/10   2
442239   37.8 N   116.0 W   5.7
                 0     11.4     222.6   16-00-00.0   15-57-12.2
  HVXLSTSSUJ                                          3 CALIFOR
NIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGIO
N
151 12286 D1 74  7 10 2442239 37.8 N-116.0 W  3  40  0.    0
 11.4   222.6 16  0  0.0 15 57 12.2 12286 D1     74/07/10
2442239   37.8 N   116.0 W   5.7
                  0     11.4     222.6   16-00-00.0   15-57-12.2
   HVXLSTSSUJ                                          3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
151 12286 D2 74  7 10 2442239 37.8 N-116.0 W  3  40  0.    0
 11.4   222.6 16  0  0.0 15 57 12.2 12286 D2     74/07/10
2442239   37.8 N   116.0 W   5.7
                  0     11.4     222.6   16-00-00.0   15-57-12.2
   HVXLSTSSUJ                                          3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
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ON
151 12286 D3 74   7 10 2442239 37.8 N-116.0 W   3  40   0.     0
 11.4    222.6 16   0   0.0 15 57 12.2 12286 D3      74/07/10
2442239    37.8 N    116.0 W     5.7
                  0      11.4     222.6    16-00-00.0    15-57-12.2
   HVXLSTSSUJ                                              3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
151 12286 D4 74   7 10 2442239 37.8 N-116.0 W   3  40   0.     0
 11.4    222.6 16   0   0.0 15 57 12.2 12286 D4      74/07/10
2442239    37.8 N    116.0 W     5.7
                  0      11.4     222.6    16-00-00.0    15-57-12.2
   HVXLSTSSUJ                                              3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
152 12292 BM 74   7 22 2442251 70.7 N  53.5 E 40 648  0.     0
 61.9       7.5  1 32 21.0  1 21 57.5 12292 BM      74/07/22
2442251    70.7 N    053.5 E     4.4
                  0      61.9       7.5    01-32-21.0    01-21-57.5
   IJJRWLSXMV                                             40 ARCTIC
 ZONE                          648 NOVAYA ZEMLYA

152 12292 D1 74   7 22 2442251 70.7 N  53.5 E 40 648  0.     0
 61.9       7.5  1 32 21.0  1 21 57.5 12292 D1      74/07/22
2442251    70.7 N    053.5 E     4.4
                  0      61.9       7.5    01-32-21.0    01-21-57.5
   IJJRWLSXMV                                             40 ARCTIC
 ZONE                          648 NOVAYA ZEMLYA

152 12292 D2 74   7 22 2442251 70.7 N  53.5 E 40 648  0.     0
 61.9       7.5  1 32 21.0  1 21 57.5 12292 D2      74/07/22
2442251    70.7 N    053.5 E     4.4
                  0      61.9       7.5    01-32-21.0    01-21-57.5
   IJJRWLSXMV                                             40 ARCTIC
 ZONE                          648 NOVAYA ZEMLYA

152 12292 D3 74   7 22 2442251 70.7 N  53.5 E 40 648  0.     0
 61.9       7.5  1 32 21.0  1 21 57.5 12292 D3      74/07/22
2442251    70.7 N    053.5 E     4.4
                  0      61.9       7.5    01-32-21.0    01-21-57.5
   IJJRWLSXMV                                             40 ARCTIC
 ZONE                          648 NOVAYA ZEMLYA

152 12292 D4 74   7 22 2442251 70.7 N  53.5 E 40 648  0.     0
 61.9       7.5  1 32 21.0  1 21 57.5 12292 D4      74/07/22
2442251    70.7 N    053.5 E     4.4
                  0      61.9       7.5    01-32-21.0    01-21-57.5
   IJJRWLSXMV                                             40 ARCTIC
 ZONE                          648 NOVAYA ZEMLYA

153 12403 BM 74   8 14 2442274 37.0 N-116.7 W   3  40   0.     0
 12.4    222.5 14   0   0.0 13 56 58.9 12403 BM      74/08/14
2442274    37.0 N    116.7 W     4.6
                  0      12.4     222.5    14-00-00.0    13-56-58.9
   MIMWVLKXPR                                              3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
153 12403 D1 74   8 14 2442274 37.0 N-116.7 W   3  40   0.     0
 12.4    222.5 14   0   0.0 13 56 58.9 12403 D1      74/08/14
2442274    37.0 N    116.7 W     4.6
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                  0      12.4      222.5     14-00-00.0     13-56-58.9
     MIMWVLKXPR                                                3 CALIFO
   RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
   ON
   153 12403 D2 74   8 14 2442274 37.0 N-116.7 W   3  40  0.    0
    12.4    222.5 14   0   0.0 13 56 58.9 12403 D2      74/08/14
   2442274    37.0 N     116.7 W     4.6
                  0      12.4      222.5     14-00-00.0     13-56-58.9
     MIMWVLKXPR                                                3 CALIFO
   RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
   ON
   153 12403 D3 74   8 14 2442274 37.0 N-116.7 W   3  40  0.    0
    12.4    222.5 14   0   0.0 13 56 58.9 12403 D3      74/08/14
   2442274    37.0 N     116.7 W     4.6
                  0      12.4      222.5     14-00-00.0     13-56-58.9
     MIMWVLKXPR                                                3 CALIFO
   RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
   ON
   153 12403 D4 74   8 14 2442274 37.0 N-116.7 W   3  40  0.    0
    12.4    222.5 14   0   0.0 13 56 58.9 12403 D4      74/08/14
   2442274    37.0 N     116.7 W     4.6
                  0      12.4      222.5     14-00-00.0     13-56-58.9
     MIMWVLKXPR                                                3 CALIFO
   RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
   ON
   154 12405 BM 74   8 29 2442289 73.4 N   55.1 E 40 648  0.    0
    59.5       6.1   9 59 55.0   9 49 47.8 12405 BM      74/08/29
   2442289    73.4 N     055.1 E     6.4
                  0      59.5         6.1    09-59-55.0     09-49-47.8
     EXWORJLBSZ                                               40 ARCTIC
    ZONE                            648 NOVAYA ZEMLYA

   154 12405 D1 74   8 29 2442289 73.4 N   55.1 E 40 648  0.    0
    59.5       6.1   9 59 55.0   9 49 47.8 12405 D1      74/08/29
   2442289    73.4 N     055.1 E     6.4
                  0      59.5         6.1    09-59-55.0     09-49-47.8
     EXWORJLBSZ                                               40 ARCTIC
    ZONE                            648 NOVAYA ZEMLYA

   154 12405 D2 74   8 29 2442289 73.4 N   55.1 E 40 648  0.    0
    59.5       6.1   9 59 55.0   9 49 47.8 12405 D2      74/08/29
   2442289    73.4 N     055.1 E     6.4
                  0      59.5         6.1    09-59-55.0     09-49-47.8
     EXWORJLBSZ                                               40 ARCTIC
    ZONE                            648 NOVAYA ZEMLYA

   154 12405 D3 74   8 29 2442289 73.4 N   55.1 E 40 648  0.    0
    59.5       6.1   9 59 55.0   9 49 47.8 12405 D3      74/08/29
   2442289    73.4 N     055.1 E     6.4
                  0      59.5         6.1    09-59-55.0     09-49-47.8
     EXWORJLBSZ                                               40 ARCTIC
    ZONE                            648 NOVAYA ZEMLYA

   154 12405 D4 74   8 29 2442289 73.4 N   55.1 E 40 648  0.    0
    59.5       6.1   9 59 55.0   9 49 47.8 12405 D4      74/08/29
   2442289    73.4 N     055.1 E     6.4
                  0      59.5         6.1    09-59-55.0     09-49-47.8
     EXWORJLBSZ                                               40 ARCTIC
    ZONE                            648 NOVAYA ZEMLYA
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155 12427 BM 74  9 26 2442317 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 15  5  0.0 15  2  4.7 12427 BM     74/09/26
2442317   37.1 N   116.0 W   5.6
                   0     12.0    220.6   15-05-00.0   15-02-04.7
   XLBIOHIPYF                                           3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
155 12427 D1 74  9 26 2442317 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 15  5  0.0 15  2  4.7 12427 D1     74/09/26
2442317   37.1 N   116.0 W   5.6
                   0     12.0    220.6   15-05-00.0   15-02-04.7
   XLBIOHIPYF                                           3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
155 12427 D2 74  9 26 2442317 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 15  5  0.0 15  2  4.7 12427 D2     74/09/26
2442317   37.1 N   116.0 W   5.6
                   0     12.0    220.6   15-05-00.0   15-02-04.7
   XLBIOHIPYF                                           3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
155 12427 D3 74  9 26 2442317 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 15  5  0.0 15  2  4.7 12427 D3     74/09/26
2442317   37.1 N   116.0 W   5.6
                   0     12.0    220.6   15-05-00.0   15-02-04.7
   XLBIOHIPYF                                           3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
155 12427 D4 74  9 26 2442317 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 15  5  0.0 15  2  4.7 12427 D4     74/09/26
2442317   37.1 N   116.0 W   5.6
                   0     12.0    220.6   15-05-00.0   15-02-04.7
   XLBIOHIPYF                                           3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
156 12429 BM 74 10 16 2442337 50.0 N  79.0 E 28 329  0.   0
 83.5   356.6  6 32 57.0  6 20 26.0 12429 BM     74/10/16
2442337   50.0 N   079.0 E   5.5
                   0     83.5    356.6   06-32-57.0   06-20-26.0
   CZXMSPTLUG                                          28 ALMA-A
TA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

156 12429 D1 74 10 16 2442337 50.0 N  79.0 E 28 329  0.   0
 83.5   356.6  6 32 57.0  6 20 26.0 12429 D1     74/10/16
2442337   50.0 N   079.0 E   5.5
                   0     83.5    356.6   06-32-57.0   06-20-26.0
   CZXMSPTLUG                                          28 ALMA-A
TA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

156 12429 D2 74 10 16 2442337 50.0 N  79.0 E 28 329  0.   0
 83.5   356.6  6 32 57.0  6 20 26.0 12429 D2     74/10/16
2442337   50.0 N   079.0 E   5.5
                   0     83.5    356.6   06-32-57.0   06-20-26.0
   CZXMSPTLUG                                          28 ALMA-A
TA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

156 12429 D3 74 10 16 2442337 50.0 N  79.0 E 28 329  0.   0
 83.5   356.6  6 32 57.0  6 20 26.0 12429 D3     74/10/16
2442337   50.0 N   079.0 E   5.5
                   0     83.5    356.6   06-32-57.0   06-20-26.0
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   CZXMSPTLUG                                              28 ALMA-A
TA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

156 12429 D4 74 10 16 2442337 50.0 N  79.0 E 28 329  0.    0
 83.5   356.6  6 32 57.0  6 20 26.0 12429 D4     74/10/16
2442337   50.0 N   079.0 E   5.5
                 0     83.5    356.6   06-32-57.0   06-20-26.0
   CZXMSPTLUG                                              28 ALMA-A
TA TO LAKE BAIKAL            329 EASTERN KAZAKH SSR

157  1047 BM 65 10 29 2439063 51.4 N 179.2 E  1   6  0.    0
 47.1   304.6 21  8 35.7 20 59 59.7  1047 BM     65/10/29
2439063   51.4 N   179.2 E   6.1
                 0     47.1    304.6   21-08-35.7   20-59-59.7
   LXGSZSFGKR                                               1 ALASKA
 - ALEUTIAN ARC                6 RAT ISLANDS, ALEUTIAN ISLANDS

157  1047 F1 65 10 29 2439063 51.4 N 179.2 E  1   6  0.    0
 47.1   304.6 21  8 35.7 20 59 59.7  1047 F1     65/10/29
2439063   51.4 N   179.2 E   6.1
                 0     47.1    304.6   21-08-35.7   20-59-59.7
   LXGSZSFGKR                                               1 ALASKA
 - ALEUTIAN ARC                6 RAT ISLANDS, ALEUTIAN ISLANDS

157  1047 F2 65 10 29 2439063 51.4 N 179.2 E  1   6  0.    0
 47.1   304.6 21  8 35.7 20 59 59.7  1047 F2     65/10/29
2439063   51.4 N   179.2 E   6.1
                 0     47.1    304.6   21-08-35.7   20-59-59.7
   LXGSZSFGKR                                               1 ALASKA
 - ALEUTIAN ARC                6 RAT ISLANDS, ALEUTIAN ISLANDS

157  1047 F3 65 10 29 2439063 51.4 N 179.2 E  1   6  0.    0
 47.1   304.6 21  8 35.7 20 59 59.7  1047 F3     65/10/29
2439063   51.4 N   179.2 E   6.1
                 0     47.1    304.6   21-08-35.7   20-59-59.7
   LXGSZSFGKR                                               1 ALASKA
 - ALEUTIAN ARC                6 RAT ISLANDS, ALEUTIAN ISLANDS

157  1047 F4 65 10 29 2439063 51.4 N 179.2 E  1   6  0.    0
 47.1   304.6 21  8 35.7 20 59 59.7  1047 F4     65/10/29
2439063   51.4 N   179.2 E   6.1
                 0     47.1    304.6   21-08-35.7   20-59-59.7
   LXGSZSFGKR                                               1 ALASKA
 - ALEUTIAN ARC                6 RAT ISLANDS, ALEUTIAN ISLANDS

158  1069 BM 65 12  1 2439096 24.1 N   5.2 E 37 551  0.    0
 86.3     58.4 10 42 43.7 10 29 58.5  1069 BM     65/12/01
2439096   24.1 N   0 5.2 E   5.1
                 0     86.3     58.4   10-42-43.7   10-29-58.5
   FOILYFXHFF                                              37 AFRICA
                              551 SOUTHERN ALGERIA

158  1069 F1 65 12  1 2439096 24.1 N   5.2 E 37 551  0.    0
 86.3     58.4 10 42 43.7 10 29 58.5  1069 F1     65/12/01
2439096   24.1 N   0 5.2 E   5.1
                 0     86.3     58.4   10-42-43.7   10-29-58.5
   FOILYFXHFF                                              37 AFRICA
                              551 SOUTHERN ALGERIA

158  1069 F2 65 12  1 2439096 24.1 N   5.2 E 37 551  0.    0
```

```
 86.3     58.4 10 42 43.7 10 29 58.5  1069 F2     65/12/01
2439096   24.1 N    0 5.2 E     5.1
                  0     86.3      58.4   10-42-43.7   10-29-58.5
   FOILYFXHFF                                          37 AFRICA
                              551 SOUTHERN ALGERIA

158  1069 F3 65 12  1 2439096 24.1 N   5.2 E 37 551  0.   0
 86.3     58.4 10 42 43.7 10 29 58.5  1069 F3     65/12/01
2439096   24.1 N    0 5.2 E     5.1
                  0     86.3      58.4   10-42-43.7   10-29-58.5
   FOILYFXHFF                                          37 AFRICA
                              551 SOUTHERN ALGERIA

158  1069 F4 65 12  1 2439096 24.1 N   5.2 E 37 551  0.   0
 86.3     58.4 10 42 43.7 10 29 58.5  1069 F4     65/12/01
2439096   24.1 N    0 5.2 E     5.1
                  0     86.3      58.4   10-42-43.7   10-29-58.5
   FOILYFXHFF                                          37 AFRICA
                              551 SOUTHERN ALGERIA

159  3853 BM 67   9 27 2439761 37.1 N-116.0 W  3  40 33.  33
 12.0    220.6 17  2 39.9 16 59 44.6  3853 BM     67/09/27
2439761   37.1 N    116.0 W    4.6
                 33     12.0     220.6   17-02-39.9   16-59-44.6
   LHYZMIXVJR                                          3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
159  3853 F1 67   9 27 2439761 37.1 N-116.0 W  3  40 33.  33
 12.0    220.6 17  2 39.9 16 59 44.6  3853 F1     67/09/27
2439761   37.1 N    116.0 W    4.6
                 33     12.0     220.6   17-02-39.9   16-59-44.6
   LHYZMIXVJR                                          3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
159  3853 F2 67   9 27 2439761 37.1 N-116.0 W  3  40 33.  33
 12.0    220.6 17  2 39.9 16 59 44.6  3853 F2     67/09/27
2439761   37.1 N    116.0 W    4.6
                 33     12.0     220.6   17-02-39.9   16-59-44.6
   LHYZMIXVJR                                          3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
159  3853 F3 67   9 27 2439761 37.1 N-116.0 W  3  40 33.  33
 12.0    220.6 17  2 39.9 16 59 44.6  3853 F3     67/09/27
2439761   37.1 N    116.0 W    4.6
                 33     12.0     220.6   17-02-39.9   16-59-44.6
   LHYZMIXVJR                                          3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
159  3853 F4 67   9 27 2439761 37.1 N-116.0 W  3  40 33.  33
 12.0    220.6 17  2 39.9 16 59 44.6  3853 F4     67/09/27
2439761   37.1 N    116.0 W    4.6
                 33     12.0     220.6   17-02-39.9   16-59-44.6
   LHYZMIXVJR                                          3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
160  2634 BM 67 12 10 2439835 36.7 N-107.2 W 34 496  0.   0
 10.0    184.5 19 32 30.5 19 30  2.3  2634 BM     67/12/10
2439835   36.7 N    107.2 W     5.1
                  0     10.0     184.5   19-32-30.5   19-30-02.3
   ILFXWOHJHI                                          34 EASTER
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N NORTH AMERICA              496 NEW MEXICO

160  2634 F1 67 12 10 2439835 36.7 N-107.2 W 34 496  0.   0
 10.0    184.5 19 32 30.5 19 30  2.3  2634 F1     67/12/10
2439835   36.7 N    107.2 W   5.1
                 0     10.0     184.5    19-32-30.5   19-30-02.3
   ILFXWDBJBI                                          34 EASTER
N NORTH AMERICA              496 NEW MEXICO

160  2634 F2 67 12 10 2439835 36.7 N-107.2 W 34 496  0.   0
 10.0    184.5 19 32 30.5 19 30  2.3  2634 F2     67/12/10
2439835   36.7 N    107.2 W   5.1
                 0     10.0     184.5    19-32-30.5   19-30-02.3
   ILFXWDBJBI                                          34 EASTER
N NORTH AMERICA              496 NEW MEXICO

160  2634 F3 67 12 10 2439835 36.7 N-107.2 W 34 496  0.   0
 10.0    184.5 19 32 30.5 19 30  2.3  2634 F3     67/12/10
2439835   36.7 N    107.2 W   5.1
                 0     10.0     184.5    19-32-30.5   19-30-02.3
   ILFXWDBJBI                                          34 EASTER
N NORTH AMERICA              496 NEW MEXICO

160  2634 F4 67 12 10 2439835 36.7 N-107.2 W 34 496  0.   0
 10.0    184.5 19 32 30.5 19 30  2.3  2634 F4     67/12/10
2439835   36.7 N    107.2 W   5.1
                 0     10.0     184.5    19-32-30.5   19-30-02.3
   ILFXWDBJBI                                          34 EASTER
N NORTH AMERICA              496 NEW MEXICO

161  5853 BM 68  4 26 2439973 37.3 N-116.5 W  3  40  0.   0
 12.1    222.7 15  2 56.1 14 59 59.9  5853 BM     68/04/26
2439973   37.3 N    116.5 W   6.3
                 0     12.1     222.7    15-02-56.1   14-59-59.9
   LXEYSVBUUZ                                           3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
161  5853 F1 68  4 26 2439973 37.3 N-116.5 W  3  40  0.   0
 12.1    222.7 15  2 56.1 14 59 59.9  5853 F1     68/04/26
2439973   37.3 N    116.5 W   6.3
                 0     12.1     222.7    15-02-56.1   14-59-59.9
   LXEYSVBUUZ                                           3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
161  5853 F2 68  4 26 2439973 37.3 N-116.5 W  3  40  0.   0
 12.1    222.7 15  2 56.1 14 59 59.9  5853 F2     68/04/26
2439973   37.3 N    116.5 W   6.3
                 0     12.1     222.7    15-02-56.1   14-59-59.9
   LXEYSVBUUZ                                           3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
161  5853 F3 68  4 26 2439973 37.3 N-116.5 W  3  40  0.   0
 12.1    222.7 15  2 56.1 14 59 59.9  5853 F3     68/04/26
2439973   37.3 N    116.5 W   6.3
                 0     12.1     222.7    15-02-56.1   14-59-59.9
   LXEYSVBUUZ                                           3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
161  5853 F4 68  4 26 2439973 37.3 N-116.5 W  3  40  0.   0
 12.1    222.7 15  2 56.1 14 59 59.9  5853 F4     68/04/26
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2439973    37.3 N    116.5 W    6.3
                 0      12.1     222.7    15-02-56.1    14-59-59.9
   LXEYSVBUUZ                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
162  6661 BM 68   9   6 2440106 37.1 N-116.0 W   3  40  0.    0
 12.0    220.6 14  2 55.2 13 59 59.9  6661 BM    68/09/06
2440106    37.1 N    116.0 W    5.6
                 0      12.0     220.6    14-02-55.2    13-59-59.9
   URMIXUWVLH                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
162  6661 F1 68   9   6 2440106 37.1 N-116.0 W   3  40  0.    0
 12.0    220.6 14  2 55.2 13 59 59.9  6661 F1    68/09/06
2440106    37.1 N    116.0 W    5.6
                 0      12.0     220.6    14-02-55.2    13-59-59.9
   URMIXUWVLH                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
162  6661 F2 68   9   6 2440106 37.1 N-116.0 W   3  40  0.    0
 12.0    220.6 14  2 55.2 13 59 59.9  6661 F2    68/09/06
2440106    37.1 N    116.0 W    5.6
                 0      12.0     220.6    14-02-55.2    13-59-59.9
   URMIXUWVLH                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
162  6661 F3 68   9   6 2440106 37.1 N-116.0 W   3  40  0.    0
 12.0    220.6 14  2 55.2 13 59 59.9  6661 F3    68/09/06
2440106    37.1 N    116.0 W    5.6
                 0      12.0     220.6    14-02-55.2    13-59-59.9
   URMIXUWVLH                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
162  6661 F4 68   9   6 2440106 37.1 N-116.0 W   3  40  0.    0
 12.0    220.6 14  2 55.2 13 59 59.9  6661 F4    68/09/06
2440106    37.1 N    116.0 W    5.6
                 0      12.0     220.6    14-02-55.2    13-59-59.9
   URMIXUWVLH                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
163  8348 BM 68  12  19 2440210 37.2 N-116.5 W   3  40  0.    0
 12.2    222.4 16 32 57.1 16 29 59.6  8348 BM    68/12/19
2440210    37.2 N    116.5 W    6.3
                 0      12.2     222.4    16-32-57.1    16-29-59.6
   EYJKFCXUML                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
163  8348 F1 68  12  19 2440210 37.2 N-116.5 W   3  40  0.    0
 12.2    222.4 16 32 57.1 16 29 59.6  8348 F1    68/12/19
2440210    37.2 N    116.5 W    6.3
                 0      12.2     222.4    16-32-57.1    16-29-59.6
   EYJKFCXUML                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
163  8348 F2 68  12  19 2440210 37.2 N-116.5 W   3  40  0.    0
 12.2    222.4 16 32 57.1 16 29 59.6  8348 F2    68/12/19
2440210    37.2 N    116.5 W    6.3
                 0      12.2     222.4    16-32-57.1    16-29-59.6
   EYJKFCXUML                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
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ON
163  8348 F3 68 12 19 2440210 37.2 N-116.5 W  3  40  0.    0
 12.2   222.4 16 32 57.1 16 29 59.6  8348 F3    68/12/19
2440210    37.2 N    116.5 W    6.3
                  0     12.2     222.4   16-32-57.1   16-29-59.6
   EYJKFCXUML                                          3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
163  8348 F4 68 12 19 2440210 37.2 N-116.5 W  3  40  0.    0
 12.2   222.4 16 32 57.1 16 29 59.6  8348 F4    68/12/19
2440210    37.2 N    116.5 W    6.3
                  0     12.2     222.4   16-32-57.1   16-29-59.6
   EYJKFCXUML                                          3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
164  7477 BM 68 12 27 2440218 41.0 N  91.4 E 27 321 33.  33
 91.2   346.8  7 43 10.9  7 30  2.9  7477 BM    68/12/27
2440218    41.0 N    091.4 E    4.6
                 33     91.2     346.8   07-43-10.9   07-30-02.9
   CWWTXGHLVF                                         27 SOUTHE
RN SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHIN
A
164  7477 F1 68 12 27 2440218 41.0 N  91.4 E 27 321 33.  33
 91.2   346.8  7 43 10.9  7 30  2.9  7477 F1    68/12/27
2440218    41.0 N    091.4 E    4.6
                 33     91.2     346.8   07-43-10.9   07-30-02.9
   CWWTXGHLVF                                         27 SOUTHE
RN SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHIN
A
164  7477 F2 68 12 27 2440218 41.0 N  91.4 E 27 321 33.  33
 91.2   346.8  7 43 10.9  7 30  2.9  7477 F2    68/12/27
2440218    41.0 N    091.4 E    4.6
                 33     91.2     346.8   07-43-10.9   07-30-02.9
   CWWTXGHLVF                                         27 SOUTHE
RN SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHIN
A
164  7477 F3 68 12 27 2440218 41.0 N  91.4 E 27 321 33.  33
 91.2   346.8  7 43 10.9  7 30  2.9  7477 F3    68/12/27
2440218    41.0 N    091.4 E    4.6
                 33     91.2     346.8   07-43-10.9   07-30-02.9
   CWWTXGHLVF                                         27 SOUTHE
RN SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHIN
A
164  7477 F4 68 12 27 2440218 41.0 N  91.4 E 27 321 33.  33
 91.2   346.8  7 43 10.9  7 30  2.9  7477 F4    68/12/27
2440218    41.0 N    091.4 E    4.6
                 33     91.2     346.8   07-43-10.9   07-30-02.9
   CWWTXGHLVF                                         27 SOUTHE
RN SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHIN
A
165  1150 BM 69  3 21 2440302 37.1 N-116.1 W  3  40  0.    0
 12.1   220.9 14 32 55.7 14 29 59.7  1150 BM    69/03/21
2440302    37.1 N    116.1 W    4.9
                  0     12.1     220.9   14-32-55.7   14-29-59.7
   YTCLXCHTYV                                          3 CALIFO
RNIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGI
ON
165  1150 F1 69  3 21 2440302 37.1 N-116.1 W  3  40  0.    0
 12.1   220.9 14 32 55.7 14 29 59.7  1150 F1    69/03/21
2440302    37.1 N    116.1 W    4.9
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                  0     12.1     220.9    14-32-55.7   14-29-59.7
   YTCLXCRTYV                                           3 CALIFO
RNIA - NEVADA REGION        40 CALIFORNIA-NEVADA BORDER REGI
ON
165  1150 F2 69  3 21 2440302 37.1 N-116.1 W  3  40  0.   0
 12.1   220.9 14 32 55.7 14 29 59.7  1150 F2    69/03/21
2440302   37.1 N   116.1 W   4.9
                  0     12.1     220.9    14-32-55.7   14-29-59.7
   YTCLXCRTYV                                           3 CALIFO
RNIA - NEVADA REGION        40 CALIFORNIA-NEVADA BORDER REGI
ON
165  1150 F3 69  3 21 2440302 37.1 N-116.1 W  3  40  0.   0
 12.1   220.9 14 32 55.7 14 29 59.7  1150 F3    69/03/21
2440302   37.1 N   116.1 W   4.9
                  0     12.1     220.9    14-32-55.7   14-29-59.7
   YTCLXCRTYV                                           3 CALIFO
RNIA - NEVADA REGION        40 CALIFORNIA-NEVADA BORDER REGI
ON
165  1150 F4 69  3 21 2440302 37.1 N-116.1 W  3  40  0.   0
 12.1   220.9 14 32 55.7 14 29 59.7  1150 F4    69/03/21
2440302   37.1 N   116.1 W   4.9
                  0     12.1     220.9    14-32-55.7   14-29-59.7
   YTCLXCRTYV                                           3 CALIFO
RNIA - NEVADA REGION        40 CALIFORNIA-NEVADA BORDER REGI
ON
166  1157 BM 69  4 30 2440342 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 17  2 55.1 16 59 59.8  1157 BM    69/04/30
2440342   37.1 N   116.0 W   5.3
                  0     12.0     220.6    17-02-55.1   16-59-59.8
   LBDVXMBIFS                                           3 CALIFO
RNIA - NEVADA REGION        40 CALIFORNIA-NEVADA BORDER REGI
ON
166  1157 F1 69  4 30 2440342 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 17  2 55.1 16 59 59.8  1157 F1    69/04/30
2440342   37.1 N   116.0 W   5.3
                  0     12.0     220.6    17-02-55.1   16-59-59.8
   LBDVXMBIFS                                           3 CALIFO
RNIA - NEVADA REGION        40 CALIFORNIA-NEVADA BORDER REGI
ON
166  1157 F2 69  4 30 2440342 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 17  2 55.1 16 59 59.8  1157 F2    69/04/30
2440342   37.1 N   116.0 W   5.3
                  0     12.0     220.6    17-02-55.1   16-59-59.8
   LBDVXMBIFS                                           3 CALIFO
RNIA - NEVADA REGION        40 CALIFORNIA-NEVADA BORDER REGI
ON
166  1157 F3 69  4 30 2440342 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 17  2 55.1 16 59 59.8  1157 F3    69/04/30
2440342   37.1 N   116.0 W   5.3
                  0     12.0     220.6    17-02-55.1   16-59-59.8
   LBDVXMBIFS                                           3 CALIFO
RNIA - NEVADA REGION        40 CALIFORNIA-NEVADA BORDER REGI
ON
166  1157 F4 69  4 30 2440342 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 17  2 55.1 16 59 59.8  1157 F4    69/04/30
2440342   37.1 N   116.0 W   5.3
                  0     12.0     220.6    17-02-55.1   16-59-59.8
   LBDVXMBIFS                                           3 CALIFO
RNIA - NEVADA REGION        40 CALIFORNIA-NEVADA BORDER REGI
ON
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167  7656 BM 69  5  7 2440349 37.3 N-116.5 W  3  40  0.   0
 12.1   222.7 13 47 56.0 13 44 59.8  7656 BM    69/05/07
2440349   37.3 N   116.5 W   5.8
                 0     12.1     222.7    13-47-56.0    13-44-59.8
   PHGJLHXIID                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
167  7656 F1 69  5  7 2440349 37.3 N-116.5 W  3  40  0.   0
 12.1   222.7 13 47 56.0 13 44 59.8  7656 F1    69/05/07
2440349   37.3 N   116.5 W   5.8
                 0     12.1     222.7    13-47-56.0    13-44-59.8
   PHGJLHXIID                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
167  7656 F2 69  5  7 2440349 37.3 N-116.5 W  3  40  0.   0
 12.1   222.7 13 47 56.0 13 44 59.8  7656 F2    69/05/07
2440349   37.3 N   116.5 W   5.8
                 0     12.1     222.7    13-47-56.0    13-44-59.8
   PHGJLHXIID                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
167  7656 F3 69  5  7 2440349 37.3 N-116.5 W  3  40  0.   0
 12.1   222.7 13 47 56.0 13 44 59.8  7656 F3    69/05/07
2440349   37.3 N   116.5 W   5.8
                 0     12.1     222.7    13-47-56.0    13-44-59.8
   PHGJLHXIID                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
167  7656 F4 69  5  7 2440349 37.3 N-116.5 W  3  40  0.   0
 12.1   222.7 13 47 56.0 13 44 59.8  7656 F4    69/05/07
2440349   37.3 N   116.5 W   5.8
                 0     12.1     222.7    13-47-56.0    13-44-59.8
   PHGJLHXIID                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
168  7659 BM 69  5 27 2440369 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 14 17 55.1 14 14 59.8  7659 BM    69/05/27
2440369   37.1 N   116.0 W   5.0
                 0     12.0     220.6    14-17-55.1    14-14-59.8
   XDZZLIDVHB                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGI
ON
168  7659 F1 69  5 27 2440369 37.1 N-116.0 W  3  40  0.   0
 12.0   220.6 14 17 55.1 14 14 59.8  7659 F1    69/05/27
2440369   37.1 N   116.0 W   5.0
                 0     12.0     220.6    14-17-55.1    14-14-59.8
   XDZZLIDVHB                                            3 CALIFO
RNIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER PRGI
ON
168  7659 F2 69  5 27 2440369 37.1 N-116.0 W  3  40  0.   0
12.0   220.6 14 17 55.1 14 14 59.8  7659 F2    69/05/27   2
440369   37.1 N   116.0 W   5.0
                0     12.0     220.6    14-17-55.1    14-14-59.8
  XDZZLIDVHB                                            3 CALIFOR
NIA - NEVADA REGION         40 CALIFORNIA-NEVADA BORDER REGIO
N
168  7659 F3 69  5 27 2440369 37.1 N-116.0 W  3  40  0.   0
12.0   220.6 14 17 55.1 14 14 59.8  7659 F3    69/05/27   2
440369   37.1 N   116.0 W   5.0
                0     12.0     220.6    14-17-55.1    14-14-59.8
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  XUZZLIDVHB                                              3 CALIFOR
NIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGIO
N
168  7659 F4 69  5 27 2440369 37.1 N-116.0 W  3  40  0.    0
12.0   220.6 14 17 55.1 14 14 59.8  7659 F4    69/05/27   2
440369   37.1 N   116.0 W   5.0
                0     12.0    220.6   14-17-55.1   14-14-59.8
  XDZZLIDVHB                                              3 CALIFOR
NIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGIO
N
169  1167 BM 69  7 16 2440419 37.1 N-116.1 W  3  40  0.    0
12.1   220.9 14 57 55.7 14 54 59.7  1167 BM    69/07/16   2
440419   37.1 N   116.1 W   5.6
                0     12.1    220.9   14-57-55.7   14-54-59.7
  LTRDJSCWXW                                              3 CALIFOR
NIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGIO
N
169  1167 F1 69  7 16 2440419 37.1 N-116.1 W  3  40  0.    0
12.1   220.9 14 57 55.7 14 54 59.7  1167 F1    69/07/16   2
440419   37.1 N   116.1 W   5.6
                0     12.1    220.9   14-57-55.7   14-54-59.7
  LTRDJSCWXW                                              3 CALIFOR
NIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGIO
N
169  1167 F2 69  7 16 2440419 37.1 N-116.1 W  3  40  0.    0
12.1   220.9 14 57 55.7 14 54 59.7  1167 F2    69/07/16   2
440419   37.1 N   116.1 W   5.6
                0     12.1    220.9   14-57-55.7   14-54-59.7
  LTRDJSCWXW                                              3 CALIFOR
NIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGIO
N
169  1167 F3 69  7 16 2440419 37.1 N-116.1 W  3  40  0.    0
12.1   220.9 14 57 55.7 14 54 59.7  1167 F3    69/07/16   2
440419   37.1 N   116.1 W   5.6
                0     12.1    220.9   14-57-55.7   14-54-59.7
  LTRDJSCWXW                                              3 CALIFOR
NIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGIO
N
169  1167 F4 69  7 16 2440419 37.1 N-116.1 W  3  40  0.    0
12.1   220.9 14 57 55.7 14 54 59.7  1167 F4    69/07/16   2
440419   37.1 N   116.1 W   5.6
                0     12.1    220.9   14-57-55.7   14-54-59.7
  LTRDJSCWXW                                              3 CALIFOR
NIA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGIO
N
170  6917 BM 71  5  7 2441079 33.0 N 127.0 E 20 231 33.   33
87.3   317.7  0 52 30.4  0 39 41.0  6917 BM    71/05/07   2
441079   33.0 N   127.0 E   4.5
               33     87.3    317.7   00-52-30.4   00-39-41.0
  VJERTOGOZL                                             20 SOUTHWE
STERN JAPAN AND RYUKYU IS 231 SOUTH KOREA

170  6917 F1 71  5  7 2441079 33.0 N 127.0 E 20 231 33.   33    8
7.3   317.7  0 52 30.4  0 39 41.0  6917 F1    71/05/07   24
41079   33.0 N   127.0 E   4.5
             33     87.3    317.7   00-52-30.4   00-39-41.0
 VJERTOGOZL                                             20 SOUTHWES
TERN JAPAN AND RYUKYU IS 231 SOUTH KOREA

170  6917 F2 71  5  7 2441079 33.0 N 127.0 E 20 231 33.   33    8
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```
7.3    317.7  0 52 30.4  0 39 41.0  6917 F2     71/05/07   24
41079    33.0 N    127.0 E    4.5
                33     87.3     317.7   00-52-30.4   00-39-41.0
 VJERTOGQZL                                           20 SOUTHWES
TERN JAPAN AND RYUKYU IS 231 SOUTH KOREA

170  6917 F3 71  5  7 2441079 33.0 N 127.0 E 20 231 33.  33   8
7.3    317.7  0 52 30.4  0 39 41.0  6917 F3     71/05/07   24
41079    33.0 N    127.0 E    4.5
                33     87.3     317.7   00-52-30.4   00-39-41.0
 VJERTOGQZL                                           20 SOUTHWES
TERN JAPAN AND RYUKYU IS 231 SOUTH KOREA

170  6917 F4 71  5  7 2441079 33.0 N 127.0 E 20 231 33.  33   8
7.3    317.7  0 52 30.4  0 39 41.0  6917 F4     71/05/07   24
41079    33.0 N    127.0 E    4.5
                33     87.3     317.7   00-52-30.4   00-39-41.0
 VJERTOGQZL                                           20 SOUTHWES
TERN JAPAN AND RYUKYU IS 231 SOUTH KOREA

171  8814 BM 71  6  5 2441108 37.9 N 113.7 E 41 658 33.  33   8
8.4    329.6 10 34 21.0 10 21 25.8  8814 BM     71/06/05   24
41108    37.9 N    113.7 E    4.7
                33     88.4     329.6   10-34-21.0   10-21-25.8
 QWEKILMHUS                                           41 EASTERN
ASIA                          658 NORTHEASTERN CHINA

171  8814 F1 71  6  5 2441108 37.9 N 113.7 E 41 658 33.  33   8
8.4    329.6 10 34 21.0 10 21 25.8  8814 F1     71/06/05   24
41108    37.9 N    113.7 E    4.7
                33     88.4     329.6   10-34-21.0   10-21-25.8
 QWEKILMHUS                                           41 EASTERN
ASIA                          658 NORTHEASTERN CHINA

171  8814 F2 71  6  5 2441108 37.9 N 113.7 E 41 658 33.  33   8
8.4    329.6 10 34 21.0 10 21 25.8  8814 F2     71/06/05   24
41108    37.9 N    113.7 E    4.7
                33     88.4     329.6   10-34-21.0   10-21-25.8
 QWEKILMHUS                                           41 EASTERN
ASIA                          658 NORTHEASTERN CHINA

171  8814 F3 71  6  5 2441108 37.9 N 113.7 E 41 658 33.  33   8
8.4    329.6 10 34 21.0 10 21 25.8  8814 F3     71/06/05   24
41108    37.9 N    113.7 E    4.7
                33     88.4     329.6   10-34-21.0   1[illegible]-25.8
 QWEKILMHUS                                           [illegible]ASTERN
ASIA                          658 NORTHEASTERN CH[illegible]

171  8814 F4 71  6  5 2441108 37.9 N 113.7 E 41 658 33.  33   8
8.4    329.6 10 34 21.0 10 21 25.8  8814 F4     71/06/05   24
41108    37.9 N    113.7 E    4.7
                33     88.4     329.6   10-34-21.0   10-21-25.8
 QWEKILMHUS                                           41 EASTERN
ASIA                          658 NORTHEASTERN CHINA

172  8816 BM 71  6  6 2441109 53.8 N-171.9 W  1   0272. 272   4
1.2    305.0  4  7 41.8  3 59 53.9  8816 BM     71/06/06   24
41109    53.8 N    171.9 W    5.2
               272     41.2     305.0   04-07-41.8   03-59-53.9
 MGOWWRDCLO                                            1 ALASKA -
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 ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

172  8816 F1 71  6  6 2441109 53.8 N-171.9 W  1   9272. 272    4
1.2   305.0  4  7 41.8  3 59 53.9  8816 F1    71/06/06   24
41109   53.8 N   171.9 W   5.2
             272     41.2    305.0   04-07-41.8   03-59-53.9
 MGUWWRDCLO                                          1 ALASKA -
 ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

172  8816 F2 71  6  6 2441109 53.8 N-171.9 W  1   9272. 272    4
1.2   305.0  4  7 41.8  3 59 53.9  8816 F2    71/06/06   24
41109   53.8 N   171.9 W   5.2
             272     41.2    305.0   04-07-41.8   03-59-53.9
 MGUWWRDCLO                                          1 ALASKA -
 ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

172  8816 F3 71  6  6 2441109 53.8 N-171.9 W  1   9272. 272    4
1.2   305.0  4  7 41.8  3 59 53.9  8816 F3    71/06/06   24
41109   53.8 N   171.9 W   5.2
             272     41.2    305.0   04-07-41.8   03-59-53.9
 MGUWWRDCLO                                          1 ALASKA -
 ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

172  8816 F4 71  6  6 2441109 53.8 N-171.9 W  1   9272. 272    4
1.2   305.0  4  7 41.8  3 59 53.9  8816 F4    71/06/06   24
41109   53.8 N   171.9 W   5.2
             272     41.2    305.0   04-07-41.8   03-59-53.9
 MGUWWRDCLO                                          1 ALASKA -
 ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

173  8823 RM 71  6 10 2441113 41.1 N 138.4 E 19 223226. 226    7
5.4   315.2 20 11 12.8 19 59 25.7  8823 RM    71/06/10   24
41113   41.1 N   138.4 E   5.7
             226     75.4    315.2   20-11-12.8   19-59-25.7
 UGRKDEIPLC                                         19 JAPAN -
KURILES - KAMCHATKA          223 EASTERN SEA OF JAPAN

173  8823 F1 71  6 10 2441113 41.1 N 138.4 E 19 223226. 226    7
5.4   315.2 20 11 12.8 19 59 25.7  8823 F1    71/06/10   24
41113   41.1 N   138.4 E   5.7
             226     75.4    315.2   20-11-12.8   19-59-25.7
 UGRKDEIPLC                                         19 JAPAN -
KURILES - KAMCHATKA          223 EASTERN SEA OF JAPAN

173  8823 F2 71  6 10 2441113 41.1 N 138.4 E 19 223226. 226    7
5.4   315.2 20 11 12.8 19 59 25.7  8823 F2    71/06/10   24
41113   41.1 N   138.4 E   5.7
             226     75.4    315.2   20-11-12.8   19-59-25.7
 UGRKDEIPLC                                         19 JAPAN -
KURILES - KAMCHATKA          223 EASTERN SEA OF JAPAN

173  8823 F3 71  6 10 2441113 41.1 N 138.4 E 19 223226. 226    7
5.4   315.2 20 11 12.8 19 59 25.7  8823 F3    71/06/10   24
41113   41.1 N   138.4 E   5.7
             226     75.4    315.2   20-11-12.8   19-59-25.7
 UGRKDEIPLC                                         19 JAPAN -
KURILES - KAMCHATKA          223 EASTERN SEA OF JAPAN

173  8823 F4 71  6 10 2441113 41.1 N 138.4 E 19 223226. 226    7
5.4   315.2 20 11 12.8 19 59 25.7  8823 F4    71/06/10   24
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41113    41.1 N    138.4 E    5.7
            226     75.4     315.2    20-11-12.8    19-59-25.7
 UQRKDEIPLC                                         19 JAPAN -
KURILES - KAMCHATKA        223 EASTERN SEA OF JAPAN

174  8824 BM 71  6 11 2441114 18.0 N -69.8 W  7  88 57.  57   4
1.5   121.4 13  3 47.1 12 55 57.0  8824 BM    71/06/11   24
41114   18.0 N   069.8 W   6.1
            57     41.5     121.4    13-03-47.1    12-55-57.0
 FLQKIEPMEZ                                          7 CARIBBEA
N LOOP                         88 DOMINICAN REPUBLIC REGION

174  8824 F1 71  6 11 2441114 18.0 N -69.8 W  7  88 57.  57   4
1.5   121.4 13  3 47.1 12 55 57.0  8824 F1    71/06/11   24
41114   18.0 N   069.8 W   6.1
            57     41.5     121.4    13-03-47.1    12-55-57.0
 FLQKIEPMEZ                                          7 CARIBBEA
N LOOP                         88 DOMINICAN REPUBLIC REGION

174  8824 F2 71  6 11 2441114 18.0 N -69.8 W  7  88 57.  57   4
1.5   121.4 13  3 47.1 12 55 57.0  8824 F2    71/06/11   24
41114   18.0 N   069.8 W   6.1
            57     41.5     121.4    13-03-47.1    12-55-57.0
 FLQKIEPMEZ                                          7 CARIBBEA
N LOOP                         88 DOMINICAN REPUBLIC REGION

174  8824 F3 71  6 11 2441114 18.0 N -69.8 W  7  88 57.  57   4
1.5   121.4 13  3 47.1 12 55 57.0  8824 F3    71/06/11   24
41114   18.0 N   069.8 W   6.1
            57     41.5     121.4    13-03-47.1    12-55-57.0
 FLQKIEPMEZ                                          7 CARIBBEA
N LOOP                         88 DOMINICAN REPUBLIC REGION

174  8824 F4 71  6 11 2441114 18.0 N -69.8 W  7  88 57.  57   4
1.5   121.4 13  3 47.1 12 55 57.0  8824 F4    71/06/11   24
41114   18.0 N   069.8 W   6.1
            57     41.5     121.4    13-03-47.1    12-55-57.0
 FLQKIEPMEZ                                          7 CARIBBEA
N LOOP                         88 DOMINICAN REPUBLIC REGION

175  9216 BM 71  6 14 2441117 56.2 N 123.6 E 41 656 33.  33   6
9.2   332.9 14  0  1.9 13 48 51.4  9216 BM    71/06/14   24
41117   56.2 N   123.6 E   5.6
            33     69.2     332.9    14-00-01.9    13-48-51.4
 MTWUDOLICW                                         41 EASTERN
ASIA                          656 EASTERN RUSSIA

175  9216 F1 71  6 14 2441117 56.2 N 123.6 E 41 656 33.  33   6
9.2   332.9 14  0  1.9 13 48 51.4  9216 F1    71/06/14   24
41117   56.2 N   123.6 E   5.6
            33     69.2     332.9    14-00-01.9    13-48-51.4
 MTWUDOLICW                                         41 EASTERN
ASIA                          656 EASTERN RUSSIA

175  9216 F2 71  6 14 2441117 56.2 N 123.6 E 41 656 33.  33   6
9.2   332.9 14  0  1.9 13 48 51.4  9216 F2    71/06/14   24
41117   56.2 N   123.6 E   5.6
            33     69.2     332.9    14-00-01.9    13-48-51.4
 MTWUDOLICW                                         41 EASTERN
ASIA                          656 EASTERN RUSSIA
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175  9216 F3 71  6 14 2441117 56.2 N 123.6 E 41 656 33.  33   6
9.2   332.9 14  0  1.9 13 48 51.4  9216 F3    71/06/14   24
41117   56.2 N   123.6 E   5.6
             33     69.2     332.9   14-00-01.9   13-48-51.4
 MTWUDQLICW                                           41 EASTERN
ASIA                         656 EASTERN RUSSIA

175  9216 F4 71  6 14 2441117 56.2 N 123.6 E 41 656 33.  33   6
9.2   332.9 14  0  1.9 13 48 51.4  9216 F4    71/06/14   24
41117   56.2 N   123.6 E   5.6
             33     69.2     332.9   14-00-01.9   13-48-51.4
 MTWUDQLICW                                           41 EASTERN
ASIA                         656 EASTERN RUSSIA

176
176  8827 BM 71  6 15 2441118 41.4 N  79.4 E 27 320 33.  33   92
.1   355.8  7 52 44.3  7 39 32.0  8827 BM    71/06/15   244
1118   41.4 N   079.4 E   5.6
            33     92.1     355.8   07-52-44.3   07-39-32.0
QWWRJLOJRC                                           27 SOUTHERN
SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

176  8827 F1 71  6 15 2441118 41.4 N  79.4 E 27 320 33.  33   9
2.1   355.8  7 52 44.3  7 39 32.0  8827 F1    71/06/15   24
41118   41.4 N   079.4 E   5.6
             33     92.1     355.8   07-52-44.3   07-39-32.0
 QWWRJLOJRC                                           27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

176  8827 F2 71  6 15 2441118 41.4 N  79.4 E 27 320 33.  33   9
2.1   355.8  7 52 44.3  7 39 32.0  8827 F2    71/06/15   24
41118   41.4 N   079.4 E   5.6
             33     92.1     355.8   07-52-44.3   07-39-32.0
 QWWRJLOJRC                                           27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

176  8827 F3 71  6 15 2441118 41.4 N  79.4 E 27 320 33.  33   9
2.1   355.8  7 52 44.3  7 39 32.0  8827 F3    71/06/15   24
41118   41.4 N   079.4 E   5.6
             33     92.1     355.8   07-52-44.3   07-39-32.0
 WWWRJLOJRC                                           27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

176  8827 F4 71  6 15 2441118 41.4 N  79.4 E 27 320 33.  33   9
2.1   355.8  7 52 44.3  7 39 32.0  8827 F4    71/06/15   24
41118   41.4 N   079.4 E   5.6
             33     92.1     355.8   07-52-44.3   07-39-32.0
 QWWRJLOJRC                                           27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

177  8828 BM 71  6 15 2441118 41.5 N  79.3 E 27 320 333  33   9
2.0   355.9 22 28 57.1 22 15 45.3  8828 BM    71/06/15   24
41118   41.5 N   079.3 E   5.1
             33     92.0     355.9   22-28-57.1   22-15-4553
 LTQVWGBEJQ                                           27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

177  8828 F1 71  6 15 2441118 41.5 N  79.3 E 27 320 33.  33   9
2.0   355.9 22 28 57.1 22 15 45.3  8828 F1    71/06/15   24
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 41118   41.5 N   079.3 E   5.1
                33     92.0     355.9    22-28-57.1    22-15-45.3
 LTQVWGBEJO                                              27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

177  8828 F2 71  6 15 2441118 41.5 N  79.3 E 27 320 33.  33    9
2.0    355.9 22 28 57.1 22 15 45.3  8828 F2     71/06/15   24
41118   41.5 N   079.3 E   5.1
                33     92.0     355.9    22-28-57.1    22-15-45.3
 LTQVWGBEJO                                              27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

177  8828 F3 71  6 15 2441118 41.5 N  79.3 E 27 320 33.  33    9
2.0    355.9 22 28 57.1 22 15 45.3  8828 F3     71/06/15   24
41118   41.5 N   079.3 E   5.1
                33     92.0     355.9    22-28-57.1    22-15-45.3
 LTQVWGBEJO                                              27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

177  8828 F4 71  6 15 2441118 41.5 N  79.3 E 27 320 33.  33    9
2.0    355.9 22 28 57.1 22 15 45.3  8828 F4     71/06/15   24
41118   41.5 N   079.3 E   5.1
                33     92.0     355.9    22-28-57.1    22-15-45.3
 LTQVWGBEJO                                              27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

178  8831 BM 71  6 16 2441119 41.4 N  79.3 E 27 320239. 239    9
2.1    355.9 11 22  6.7 11  8 54.4  8831 BM     71/06/16   24
41119   41.4 N   079.3 E   4.3
               239     92.1     355.9    11-22-06.7    11-08-54.4
 LSVEGQHTKM                                              27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

178  8831 F1 71  6 16 2441119 41.4 N  79.3 E 27 320239. 239    9
2.1    355.9 11 22  6.7 11  8 54.4  8831 F1     71/06/16   24
41119   41.4 N   079.3 E   4.3
               239     92.1     355.9    11-22-06.7    11-08-54.4
 LSVEGQHTKM                                              27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

178  8831 F2 71  6 16 2441119 41.4 N  79.3 E 27 320239. 239    9
2.1    355.9 11 22  6.7 11  8 54.4  8831 F2     71/06/16   24
41119   41.4 N   079.3 E   4.3
               239     92.1     355.9    11-22-06.7    11-08-54.4
 LSVEGQHTKM                                              27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

178  8831 F3 71  6 16 2441119 41.4 N  79.3 E 27 320239. 239    9
2.1    355.9 11 22  6.7 11  8 54.4  8831 F3     71/06/16   24
41119   41.4 N   079.3 E   4.3
               239     92.1     355.9    11-22-06.7    11-08-54.4
 LSVEGQHTKM                                              27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION

178  8831 F4 71  6 16 2441119 41.4 N  79.3 E 27 320239. 239    9
2.1    355.9 11 22  6.7 11  8 54.4  8831 F4     71/06/16   24
41119   41.4 N   079.3 E   4.3
               239     92.1     355.9    11-22-06.7    11-08-54.4
 LSVEGQHTKM                                              27 SOUTHERN
 SINKIANG TO KANSU        320 KIRGIZ-SINKIANG BORDER REGION
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179  8936 BM 71  6 22 2441125 -9.8 S 160.2 E 15 193 20.  20     9
9.6   265.8 11 36 48.8 11 23  2.4  8936 BM     71/06/22   24
41125    9.8 S   160.2 E   5.4
           20    99.6    265.8   11-36-48.8   11-23-02.4
 LFKGZOKBSY                                           15 BISMARCK
 AND SOLOMON ISLANDS      193 SOLOMON ISLANDS

179  8936 F1 71  6 22 2441125 -9.8 S 160.2 E 15 193 20.  20     9
9.6   265.8 11 36 48.8 11 23  2.4  8936 F1     71/06/22   24
41125    9.8 S   160.2 E   5.4
           20    99.6    265.8   11-36-48.8   11-23-02.4
 LFKGZOKBSY                                           15 BISMARCK
 AND SOLOMON ISLANDS      193 SOLOMON ISLANDS

179  8936 F2 71  6 22 2441125 -9.8 S 160.2 E 15 193 20.  20     9
9.6   265.8 11 36 48.8 11 23  2.4  8936 F2     71/06/22   24
41125    9.8 S   160.2 E   5.4
           20    99.6    265.8   11-36-48.8   11-23-02.4
 LFKGZOKBSY                                           15 BISMARCK
 AND SOLOMON ISLANDS      193 SOLOMON ISLANDS

179  8936 F3 71  6 22 2441125 -9.8 S 160.2 E 15 193 20.  20     9
9.6   265.8 11 36 48.8 11 23  2.4  8936 F3     71/06/22   24
41125    9.8 S   160.2 E   5.4
           20    99.6    265.8   11-36-48.8   11-23-02.4
 LFKGZOKBSY                                           15 BISMARCK
 AND SOLOMON ISLANDS      193 SOLOMON ISLANDS

179  8936 F4 71  6 22 2441125 -9.8 S 160.2 E 15 193 20.  20     9
9.6   265.8 11 36 48.8 11 23  2.4  8936 F4     71/06/22   24
41125    9.8 S   160.2 E   5.4
           20    99.6    265.8   11-36-48.8   11-23-02.4
 LFKGZOKBSY                                           15 BISMARCK
 AND SOLOMON ISLANDS      193 SOLOMON ISLANDS

180  8935 BM 71  6 22 2441125 36.2 N  69.8 E 53 718166. 166     9
7.3      3.2  6 43 16.0  6 29 39.7  8935 BM     71/06/22   24
41125   36.2 N   069.8 E    4.9
          166    97.3       3.2   06-43-16.0   06-29-39.7
 IFIVCYVLGD                                           53 G REG =
718 AND D GT 70           718 HINDU KUSH REGION

180  8935 F1 71  6 22 2441125 36.2 N  69.8 E 53 718166. 166     9
7.3      3.2  6 43 16.0  6 29 39.7  8935 F1     71/06/22   24
41125   [illegible].2 N   069.8 E    4.9
          166    97.3       3.2   06-43-16.0   06-29-39.7
 IFIVCYV[illegible]                                           53 G REG =
[illegible] GT 70           718 HINDU KUSH REGION

[illegible] F2 71  6 22 2441125 36.2 N  69.8 E 53 718166. 166     9
[illegible] 6 29 39.7  8935 F2     71/06/22   24
[illegible] 4.9
[illegible] 3.2   06-43-16.0   06-29-39.7
                                                      53 G REG =
[illegible] KUSH REGION

[illegible] E 53 718166. 166     9
[illegible] 71/06/22   24
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            166     97.3       3.2   06-43-16.0   06-29-39.7
 TEIVCYVLQD                                          53 G REG =
718 AND D GI 70            718 HINDU KUSH REGION

181  8935 F4 71   6 22 2441125 36.2 N  69.8 E 53 718166. 166     9
7.3       3.2  6 43 16.0  6 29 39.7  8935 F4     71/06/22    24
41125    36.2 N    069.8 E    4.9
            166     97.3       3.2   06-43-16.0   06-29-39.7
 TEIVCYVLQD                                          53 G REG =
718 AND D GI 70            718 HINDU KUSH REGION

181  8938 BM 71   6 24 2441127 37.2 N-116.1 W   3  40  5.   5    1
2.0    221.2 14   7  2.5 14   4  7.5  8938 BM     71/06/24    24
41127    37.2 N    116.1 W    0.0
             5     12.0     221.2   14-07-02.5   14-04-07.5
 XJSUWTYJLH                                           3 CALIFORN
IA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGION

181  8938 F1 71   6 24 2441127 37.2 N-116.1 W .3  40  5.   5    1
2.0    221.2 14   7  2.5 14   4  7.5  8938 F1     71/06/24    24
41127    37.2 N    116.1 W    0.0
             5     12.0     221.2   14-07-02.5   14-04-07.5
 XJSUWTYJLH                                           3 CALIFORN
IA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER RRGION

181  8938 F2 71   6 24 2441127 37.2 N-116.1 W   3  40  5.   5    1
2.0    221.2 14   7  2.5 14   4  7.5  8938 F2     71/06/24    24
41127    37.2 N    116.1 W    0.0
             5     12.0     221.2   14-07-02.5   14-04-07.5
 XJSUWTYJLH                                           3 CALIFORN
IA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGION

181  8938 F3 71   6 24 2441127 37.2 N-116.1 W   3  40  5.   5    1
2.0    221.2 14   7  2.5 14   4  7.5  8938 F3     71/06/24    24
41127    37.2 N    116.1 W    0.0
             5     12.0     221.2   14-07-02.5   14-04-07.5
 XJSUWTYJLH                                           3 CALIFORN
IA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGION

181  8938 F4 71   6 24 2441127 37.2 N-116.1 W   3  40  5.   5    1
2.0    221.2 14   7  2.5 14   4  7.5  8938 F4     71/06/24    24
41127    37.2 N    116.1 W    0.0
             5     12.0     221.2   14-07-02.5   14-04-07.5
 XJSUWTYJLH                                           3 CALIFORN
IA - NEVADA REGION          40 CALIFORNIA-NEVADA BORDER REGION

182  8940 BM 71   6 26 2441129 19.0 N -68.0 W   7  89 33.  33    4
1.8    118.5 15 55 20.0 15 47 27.2  8940 BM     71/06/26    24
41129    19.0 N    068.0 W    5.3
            33     41.8     118.5   15-55-20.0   15-47-27.2
 DOBFLBWIZD                                           7 CARIBBEA
N LOOP                      89 MONA PASSAGE

182  8940 F1 71   6 26 2441129 19.0 N -68.0 W   7  89 33.  33    4
1.8    118.5 15 55 20.0 15 47 27.2  8940 F1     71/06/26    24
41129    19.0 N    068.0 W    5.3
            33     41.8     118.5   15-55-20.0   15-47-27.2
 DOBFLBWIZD                                           7 CARIBBEA
N LOOP                      89 MONA PASSAGE
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182  8940 F2 71   6 26 2441129 19.0 N -68.0 W   7  89 33.   33     4
1.8   118.5 15 55 20.0 15 47 27.2  8940 F2     71/06/26    24
41129    19.0 N    068.0 W     5.3
              33     41.8     118.5    15-55-20.0    15-47-27.2
 DOBFLBWIZD                                             7 CARIBBEA
N LOOP                              89 MONA PASSAGE

182  8940 F3 71   6 26 2441129 19.0 N -68.0 W   7  89 33.   33     4
1.8   118.5 15 55 20.0 15 47 27.2  8940 F3     71/06/26    24
41129    19.0 N    068.0 W     5.3
              33     41.8     118.5    15-55-20.0    15-47-27.2
 DOBFLBWIZD                                             7 CARIBBEA
N LOOP                              89 MONA PASSAGE

182  8940 F4 71   6 26 2441129 19.0 N -68.0 W   7  89 33.   33     4
1.8   118.5 15 55 20.0 15 47 27.2  8940 F4     71/06/26    24
41129    19.0 N    068.0 W     5.3
              33     41.8     118.5    15-55-20.0    15-47-27.2
 DOBFLBWIZD                                             7 CARIBBEA
N LOOP                              89 MONA PASSAGE

183  8942 BM 71   6 26 2441129 36.3 N  71.4 E 48 717127. 127     9
7.3       1.9 22 36 49.1 22 23 13.0  8942 BM     71/06/26    24
41129    36.3 N    071.4 E     5.0
             127     97.3        1.9    22-36-49.1    22-23-13.0
 LKOCQUYMSO                                            48 HINDU KU
SH AND PAMIR                       717 AFGHANISTAN-USSR BORDER REGION

183  8942 F1 71   6 26 2441129 36.3 N  71.4 E 48 717127. 127     9
7.3       1.9 22 36 49.1 22 23 13.0  8942 F1     71/06/26    24
41129    36.3 N    071.4 E     5.0
             127     97.3        1.9    22-36-49.1    22-23-13.0
 LKOCQUYMSO                                            48 HINDU KU
SH AND PAMIR                       717 AFGHANISTAN-USSR BORDER REGION

183  8942 F2 71   6 26 2441129 36.3 N  71.4 E 48 717127. 127     9
7.3       1.9 22 36 49.1 22 23 13.0  8942 F2     71/06/26    24
41129    36.3 N    071.4 E     5.0
             127     97.3        1.9    22-36-49.1    22-23-13.0
 LKOCQUYMSO                                            48 HINDU KU
SH AND PAMIR                       717 AFGHANISTAN-USSR BORDER REGION

183  8942 F3 71   6 26 2441129 36.3 N  71.4 E 48 717127. 127     9
7.3       1.9 22 36 49.1 22 23 13.0  8942 F3     71/06/26    24
41129    36.3 N    071.4 E     5.0
             127     97.3        1.9    22-36-49.1    22-23-13.0
 LKOCQUYMSO                                            48 HINDU KU
SH AND PAMIR                       717 AFGHANISTAN-USSR BORDER REGION

183  8942 F4 71   6 26 2441129 36.3 N  71.4 E 48 717127. 127     9
7.3       1.9 22 36 49.1 22 23 13.0  8942 F4     71/06/26    24
41129    36.3 N    071.4 E     5.0
             127     97.3        1.9    22-36-49.1    22-23-13.0
 LKOCQUYMSO                                            48 HINDU KU
SH AND PAMIR                       717 AFGHANISTAN-USSR BORDER REGION

184  8943 BM 71   6 27 2441130 52.0 N-170.4 W   1    9 33.   33     4
0.9    301.9 18 15  8.8 18  7 23.4  8943 BM     71/06/27    24
41130    52.0 N    170.4 W     3.0
              33     40.9     301.9    18-15-08.8    18-07-23.4
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     LZKDWWJVQY                                              1 ALASKA -
     ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

    184  8943 F1 71  6 27 2441130 52.0 N-170.4 W  1   9 33.  33     4
    0.9   301.9 18 15  8.8 18  7 23.4  8943 F1    71/06/27   24
    41130   52.0 N   170.4 W   3.0
                33    40.9    301.9   18-15-08.8   18-07-23.4
     LZKDWWJVQY                                              1 ALASKA -
     ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

    184  8943 F2 71  6 27 2441130 52.0 N-170.4 W  1   9 33.  33     4
    0.9   301.9 18 15  8.8 18  7 23.4  8943 F2    71/06/27   24
    41130   52.0 N   170.4 W   3.0
                33    40.9    301.9   18-15-08.8   18-07-23.4
     LZKDWWJVQY                                              1 ALASKA -
     ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

    184  8943 F3 71  6 27 2441130 52.0 N-170.4 W  1   9 33.  33     4
    0.9   301.9 18 15  8.8 18  7 23.4  8943 F3    71/06/27   24
    41130   52.0 N   170.4 W   3.0
                33    40.9    301.9   18-15-08.8   18-07-23.4
     LZKDWWJVQY                                              1 ALASKA -
     ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

    184  8943 F4 71  6 27 2441130 52.0 N-170.4 W  1   9 33.  33     4
    0.9   301.9 18 15  8.8 18  7 23.4  8943 F4    71/06/27   24
    41130   52.0 N   170.4 W   3.0
                33    40.9    301.9   18-15-08.8   18-07-23.4
     LZKDWWJVQY                                              1 ALASKA -
     ALEUTIAN ARC                   9 FOX ISLANDS, ALEUTIAN ISLANDS

    185  8944 HM 71  6 28 2441131 37.9 N 106.2 E 27 323 33.  33     9
    0.8   335.0  5 14 50.3  5  1 43.9  8944 HM    71/06/28   24
    41131   37.9 N   106.2 E   5.2
                33    90.8    335.0   05-14-50.3   05-01-43.9
     DUBZOLYRHQ                                             27 SOUTHERN
     SINKIANG TO KANSU       323 NORTHERN CHINA

    185  8944 F1 71  6 28 2441131 37.9 N 106.2 E 27 323 33.  33     9
    0.8   335.0  5 14 50.3  5  1 43.9  8944 F1    71/06/28   24
    41131   37.9 N   106.2 E   5.2
                33    90.8    335.0   05-14-50.3   05-01-43.9
     DUBZOLYRHQ                                             27 SOUTHERN
     SINKIANG TO KANSU       323 NORTHERN CHINA

    185  8944 F2 71  6 28 2441131 37.9 N 106.2 E 27 323 33.  33     9
    0.8   335.0  5 14 50.3  5  1 43.9  8944 F2    71/06/28   24
    41131   37.9 N   106.2 E   5.2
                33    90.8    335.0   05-14-50.3   05-01-43.9
     DUBZOLYRHQ                                             27 SOUTHERN
     SINKIANG TO KANSU       323 NORTHERN CHINA

    185  8944 F3 71  6 28 2441131 37.9 N 106.2 E 27 323 33.  33     9
    0.8   335.0  5 14 50.3  5  1 43.9  8944 F3    71/06/28   24
    41131   37.9 N   106.2 E   5.2
                33    90.8    335.0   05-14-50.3   05-01-43.9
     DUBZOLYRHQ                                             27 SOUTHERN
     SINKIANG TO KANSU       323 NORTHERN CHINA

    185  8944 F4 71  6 28 2441131 37.9 N 106.2 E 27 323 33.  33    90
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.8    335.0  5 14 50.3  5  1 43.9  8944 F4     71/06/28   244
1131   37.9 N   106.2 E   5.2
              33    90.8    335.0   05-14-50.3   05-01-43.9
DURZOLYRHQ                                     27 SOUTHERN
SINKIANG TO KANSU        323 NORTHERN CHINA

186  8954 BM 71  6 29 2441132 37.2 N  36.8 E 30 366 35.  35   90
.1     28.6  9 21  9.8  9  8  6.5  8954 BM     71/06/29   244
1132   37.2 N   036.8 E   5.0
              35    90.1     28.6   09-21-09.8   09-08-06.5
YGLGBJZDKQ                                     30 MIDDLE EA
ST - CRIMEA - BALKANS   366 TURKEY

186  8954 F1 71  6 29 2441132 37.2 N  36.8 E 30 366 35.  35   90
.1     28.6  9 21  9.8  9  8  6.5  8954 F1     71/06/29   244
1132   37.2 N   036.8 E   5.0
              35    90.1     28.6   09-21-09.8   09-08-06.5
YGLGBJZDKQ                                     30 MIDDLE EA
ST - CRIMEA - BALKANS   366 TURKEY

186  8954 F2 71  6 29 2441132 37.2 N  36.8 E 30 366 35.  35   90
.1     28.6  9 21  9.8  9  8  6.5  8954 F2     71/06/29   244
1132   37.2 N   036.8 E   5.0
              35    90.1     28.6   09-21-09.8   09-08-06.5
YGLGBJZDKQ                                     30 MIDDLE EA
ST - CRIMEA - BALKANS   366 TURKEY

186  8954 F3 71  6 29 2441132 37.2 N  36.8 E 30 366 35.  35   90
.1     28.6  9 21  9.8  9  8  6.5  8954 F3     71/06/29   244
1132   37.2 N   036.8 E   5.0
              35    90.1     28.6   09-21-09.8   09-08-06.5
YGLGBJZDKQ                                     30 MIDDLE EA
ST - CRIMEA - BALKANS   366 TURKEY

186  8954 F4 71  6 29 2441132 37.2 N  36.8 E 30 366 35.  35   90
.1     28.6  9 21  9.8  9  8  6.5  8954 F4     71/06/29   244
1132   37.2 N   036.8 E   5.0
              35    90.1     28.6   09-21-09.8   09-08-06.5
YGLGBJZDKQ                                     30 MIDDLE EA
ST - CRIMEA - BALKANS   366 TURKEY

187  8955 BM 71  6 29 2441132 54.6 N-161.6 W  1  17 24.  24   35
.1    303.8 14 10 12.9 14  3 15.6  8955 BM     71/06/29   244
1132   54.6 N   161.6 W   5.2
              24    35.1    303.8   14-10-12.9   14-03-15.6
TSUFFQLBMP                                      1 ALASKA -
ALEUTIAN ARC                 17 SOUTH OF ALASKA

187  8955 F1 71  6 29 2441132 54.6 N-161.6 W  1  17 24.  24   35
.1    303.8 14 10 12.9 14  3 15.6  8955 F1     71/06/29   244
1132   54.6 N   161.6 W   5.2
              24    35.1    303.8   14-10-12.9   14-03-15.6
TSUFFQLBMP                                      1 ALASKA -
ALEUTIAN ARC                 17 SOUTH OF ALASKA

187  8955 F2 71  6 29 2441132 54.6 N-161.6 W  1  17 24.  24   35
.1    303.8 14 10 12.9 14  3 15.6  8955 F2     71/06/29   244
1132   54.6 N   161.6 W   5.2
              24    35.1    303.8   14-10-12.9   14-03-15.6
TSUFFQLBMP                                      1 ALASKA -
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ALEUTIAN ARC                17 SOUTH OF ALASKA

187  8955 F3 71   6 29 2441132 54.6 N-161.6 W   1  17 24.  24    35
.1    303.8 14 10 12.9 14   3 15.6  8955 F3      71/06/29    244
1132    54.6 N    161.6 W    5.2
            24      35.1     303.8   14-10-12.9   14-03-15.6
TSUFFQLBMP                                            1 ALASKA -
ALEUTIAN ARC                17 SOUTH OF ALASKA

187  8955 F4 71   6 29 2441132 54.6 N-161.6 W   1  17 24.  24    35
.1    303.8 14 10 12.9 14   3 15.6  8955 F4      71/06/29    244
1132    54.6 N    161.6 W    5.2
            24      35.1     303.8   14-10-12.9   14-03-15.6
TSUFFQLBMP                                            1 ALASKA -
ALEUTIAN ARC                17 SOUTH OF ALASKA

188  6919 BM 71   7  1 2441134 43.0 N -97.3 W 34 463 33.  33     7
.3    117.0  1 38 50.3  1 38 50.3  6919 BM      71/07/01    244
1134    43.0 N    097.3 W    4.6
            33       7.3     117.0   01-38-50.3   01-38-50.3
FELWKRWQMJ                                           34 EASTERN N
ORTH AMERICA               463 NEBRASKA

188  6919 F1 71   7  1 2441134 43.0 N -97.3 W 34 463 33.  33     7
.3    117.0  1 38 50.3  1 38 50.3  6919 F1      71/07/01    244
1134    43.0 N    097.3 W    4.6
            33       7.3     117.0   01-38-50.3   01-38-50.3
FELWKRWQMJ                                           34 EASTERN N
ORTH AMERICA               463 NEBRASKA

188  6919 F2 71   7  1 2441134 43.0 N -97.3 W 34 463 33.  33     7
.3    117.0  1 38 50.3  1 38 50.3  6919 F2      71/07/01    244
1134    43.0 N    097.3 W    4.6
            33       7.3     117.0   01-38-50.3   01-38-50.3
FELWKRWGMJ                                           34 EASTERN N
ORTH AMERICA               463 NEBRASKA

188  6919 F3 71   7  1 2441134 43.0 N -97.3 W 34 463 33.  33     7
.3    117.0  1 38 50.3  1 38 50.3  6919 F3      71/07/01    244
1134    43.0 N    097.3 W    4.6
            33       7.3     117.0   01-38-50.3   01-38-50.3
FELWKRWGMJ                                           34 EASTERN N
ORTH AMERICA               463 NEBRASKA

188  6919 F4 71   7  1 2441134 43.0 N -97.3 W 34 463 33.  33     7
.3    117.0  1 38 50.3  1 38 50.3  6919 F4      71/07/01    244
1134    43.0 N    097.3 W    4.6
            33       7.3     117.0   01-38-50.3   01-38-50.3
FELWKRWQMJ                                           34 EASTERN N
ORTH AMERICA               463 NEBRASKA

189  8838 BM 71   7  3 2441136 41.4 N -72.2 W 34 472 17.  17    24
.9     89.8  4 39 32.3  4 34  6.4  8838 BM      71/07/03    244
1136    41.4 N    072.2 W    4.9
            17      24.9      89.8   04-39-32.3   04-34-06.4
BFCCQZEYTL                                           34 EASTERN N
ORTH AMERICA               472 NEW YORK

189  8838 F1 71   7  3 2441136 41.4 N -72.2 W 34 472 17.  17    24
.9     89.8  4 39 32.3  4 34  6.4  8838 F1      71/07/03    244
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1136   41.4 N    072.2 W    4.9
            17      24.9       89.8   04-39-32.3   04-34-06.4
BFCCQZEYIL                                          34 EASTERN N
ORTH AMERICA               472 NEW YORK

189  8838 F2 71   7  3 2441136 41.4 N -72.2 W 34 472 17.  17    24
.9     89.8  4 39 32.3  4 34  6.4  8838 F2     71/07/03   244
1136   41.4 N    072.2 W    4.9
            17      24.9       89.8   04-39-32.3   04-34-06.4
BFCCQZEYIL                                          34 EASTERN N
ORTH AMERICA               472 NEW YORK

189  8838 F3 71   7  3 2441136 41.4 N -72.2 W 34 472 17.  17    24
.9     89.8  4 39 32.3  4 34  6.4  8838 F3     71/07/03   244
1136   41.4 N    072.2 W    4.9
            17      24.9       89.8   04-39-32.3   04-34-06.4
BFCCQZEYIL                                          34 EASTERN N
ORTH AMERICA               472 NEW YORK

190  8838 F4 71   7  3 2441136 41.4 N -72.2 W 34 472 17.  17    24
.9     89.8  4 39 32.3  4 34  6.4  8838 F4     71/07/03   244
1136   41.4 N    072.2 W    4.9
            17      24.9       89.8   04-39-32.3   04-34-06.4
BFCCQZEYIL                                          34 EASTERN N
ORTH AMERICA               472 NEW YORK

190  8839 BM 71   7  3 2441136 35.0 N -81.0 W 34 511 33.  33    22
.3    112.7  8 15 43.4  8 10 42.9  8839 BM     71/07/03   244
1136   35.0 N    081.0 W    5.0
            33      22.3      112.7   08-15-43.4   08-10-42.9
LHZZQBFWVS                                          34 EASTERN N
ORTH AMERICA               511 SOUTH CAROLINA

190  8839 F1 71   7  3 2441136 35.0 N -81.0 W 34 511 33.  33    22
.3    112.7  8 15 43.4  8 10 42.9  8839 F1     71/07/03   244
1136   35.0 N    081.0 W    5.0
            33      22.3      112.7   08-15-43.4   08-10-42.9
LHZZQBFWVS                                          34 EASTERN N
ORTH AMERICA               511 SOUTH CAROLINA

190  8839 F2 71   7  3 2441136 35.0 N -81.0 W 34 511 33.  33    22
.3    112.7  8 15 43.4  8 10 42.9  8839 F2     71/07/03   244
1136   35.0 N    081.0 W    5.0
            33      22.3      112.7   08-15-43.4   08-10-42.9
LHZZQBFWVS                                          34 EASTERN N
ORTH AMERICA               511 SOUTH CAROLINA

190  8839 F3 71   7  3 2441136 35.0 N -81.0 W 34 511 33.  33    22
.3    112.7  8 15 43.4  8 10 42.9  8839 F3     71/07/03   244
1136   35.0 N    081.0 W    5.0
            33      22.3      112.7   08-15-43.4   08-10-42.9
LHZZQBFWVS                                          34 EASTERN N
ORTH AMERICA               511 SOUTH CAROLINA

190  8839 F4 71   7  3 2441136 35.0 N -81.0 W 34 511 33.  33    22
.3    112.7  8 15 43.4  8 10 42.9  8839 F4     71/07/03   244
1136   35.0 N    081.0 W    5.0
            33      22.3      112.7   08-15-43.4   08-10-42.9
LHZZQBFWVS                                          34 EASTERN N
ORTH AMERICA               511 SOUTH CAROLINA
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191  8961 BM 71   7 11 2441144 37.2 N -36.8 W 32 403  9.   9    51
.0    74.2 20 25 56.8 20 16 51.1  8961 BM      71/07/11   244
1144   37.2 N    036.8 W    5.2
               9     51.0      74.2    20-25-56.8    20-16-51.1
GRUVOQTVGL                                              32 ATLANTIC
OCEAN                          403 NORTH ATLANTIC RIDGE

191  8961 F1 71   7 11 2441144 37.2 N -36.8 W 32 403  9.   9    51
.0    74.2 20 25 56.8 20 16 51.1  8961 F1      71/07/11   244
1144   37.2 N    036.8 W    5.2
               9     51.0      74.2    20-25-56.8    20-16-51.1
GRUVOQTVGL                                              32 ATLANTIC
OCEAN                          403 NORTH ATLANTIC RIDGE

191  8961 F2 71   7 11 2441144 37.2 N -36.8 W 32 403  9.   9    51
.0    74.2 20 25 56.8 20 16 51.1  8961 F2      71/07/11   244
1144   37.2 N    036.8 W    5.2
               9     51.0      74.2    20-25-56.8    20-16-51.1
GRUVOQTVGL                                              32 ATLANTIC
OCEAN                          403 NORTH ATLANTIC RIDGE

191  8961 F3 71   7 11 2441144 37.2 N -36.8 W 32 403  9.   9    51
.0    74.2 20 25 56.8 20 16 51.1  8961 F3      71/07/11   244
1144   37.2 N    036.8 W    5.2
               9     51.0      74.2    20-25-56.8    20-16-51.1
GRUVOQTVGL                                              32 ATLANTIC
OCEAN                          403 NORTH ATLANTIC RIDGE

191  8961 F4 71   7 11 2441144 37.2 N -36.8 W 32 403  9.   9    51
.0    74.2 20 25 56.8 20 16 51.1  8961 F4      71/07/11   244
1144   37.2 N    036.8 W    5.2
               9     51.0      74.2    20-25-56.8    20-16-51.1
GRUVOQTVGL                                              32 ATLANTIC
OCEAN                          403 NORTH ATLANTIC RIDGE

192  8964 BM 71   7 15 2441148 44.8 N  10.8 E 36 545  8.   8    73
.3     41.4  1 44 55.3  1 33 20.6  8964 BM     71/07/15   244
1148   44.8 N    010.8 E    5.2
               8     73.3      41.4    01-44-55.3    01-33-20.6
QTFLJEUHCC                                              36 NORTHWEST
ERN EUROPE                     545 NORTHERN ITALY

192  8964 F1 71   7 15 2441148 44.8 N  10.8 E 36 545  8.   8    73
.3     41.4  1 44 55.3  1 33 20.6  8964 F1     71/07/15   244
1148   44.8 N    010.8 E    5.2
               8     73.3      41.4    01-44-55.3    01-33-20.6
QTFLJEUHCC                                              36 NORTHWEST
ERN EUROPE                     545 NORTHERN ITALY

192  8964 F2 71   7 15 2441148 44.8 N  10.8 E 36 545  8.   8    73
.3     41.4  1 44 55.3  1 33 20.6  8964 F2     71/07/15   244
1148   44.8 N    010.8 E    5.2
               8     73.3      41.4    01-44-55.3    01-33-20.6
QTFLJEUHCC                                              36 NORTHWEST
ERN EUROPE                     545 NORTHERN ITALY

192  8964 F3 71   7 15 2441148 44.8 N  10.8 E 36 545  8.   8    73
.3     41.4  1 44 55.3  1 33 20.6  8964 F3     71/07/15   244
1148   44.8 N    010.8 E    5.2
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                8      73.3       41.4    01-44-55.3    01-33-20.6
QTFLJEUHCC                                               36 NORTHWEST
ERN EUROPE                       545 NORTHERN ITALY

192  8964 F4 71   7 15 2441148 44.8 N   10.8 E 36 545  8.   8      73
.3    41.4  1 44 55.3  1 33 20.6  8964 F4      71/07/15    244
1148    44.8 N    010.8 E    5.2
                8      73.3       41.4    01-44-55.3    01-33-20.6
QTFLJEUHCC                                               36 NORTHWEST
ERN EUROPE                       545 NORTHERN ITALY

193  8967 BM 71   7 17 2441150 38.3 N   39.8 E 30 366 33.  33      90
.0    26.0 21 58 21.5 21 45 18.4  8967 BM      71/07/17    244
1150    38.3 N    039.8 E    4.5
               33      90.0       26.0    21-58-21.5    21-45-18.4
YWDLUKYKQR                                               30 MIDDLE EA
ST - CRIMEA - BALKANS    366 TURKEY

193  8967 F1 71   7 17 2441150 38.3 N   39.8 E 30 366 33.  33      90
.0    26.0 21 58 21.5 21 45 18.4  8967 F1      71/07/17    244
1150    38.3 N    039.8 E    4.5
               33      90.0       26.0    21-58-21.5    21-45-18.4
YWDLUKYKQR                                               30 MIDDLE EA
ST - CRIMEA - BALKANS    366 TURKEY

193  8967 F2 71   7 17 2441150 38.3 N   39.8 E 30 366 33.  33      90
.0    26.0 21 58 21.5 21 45 18.4  8967 F2      71/07/17    244
1150    38.3 N    039.8 E    4.5
               33      90.0       26.0    21-58-21.5    21-45-18.4
YWDLUKYKQR                                               30 MIDDLE EA
ST - CRIMEA - BALKANS    366 TURKEY

193  8967 F3 71   7 17 2441150 38.3 N   39.8 E 30 366 33.  33      90
.0    26.0 21 58 21.5 21 45 18.4  8967 F3      71/07/17    244
1150    38.3 N    039.8 E    4.5
               33      90.0       26.0    21-58-21.5    21-45-18.4
YWDLUKYKQR                                               30 MIDDLE EA
ST - CRIMEA - BALKANS    366 TURKEY

193  8967 F4 71   7 17 2441150 38.3 N   39.8 E 30 366 33.  33      90
.0    26.0 21 58 21.5 21 45 18.4  8967 F4      71/07/17    244
1150    38.3 N    039.8 E    4.5
               33      90.0       26.0    21-58-21.5    21-45-18.4
YWDLUKYKQR                                               30 MIDDLE EA
ST - CRIMEA - BALKANS    366 TURKEY

194  9137 BM 71   7 24 2441157 39.5 N   70.7 E 48 715 33.  33      94
.1     2.4 11 56 55.7 11 43 34.4  9137 BM      71/07/24    244
1157    39.5 N    070.7 E    5.6
               33      94.1        2.4    11-56-55.7    11-43-34.4
OBMMSQIIOL                                               48 HINDU KUS
H AND PAMIR                      715 TADZHIK SSR

194  9137 F1 71   7 24 2441157 39.5 N   70.7 E 48 715 33.  33      94
.1     2.4 11 56 55.7 11 43 34.4  9137 F1      71/07/24    244
1157    39.5 N    070.7 E    5.6
               33      94.1        2.4    11-56-55.7    11-43-34.4
OBMMSQIIOL                                               48 HINDU KUS
H AND PAMIR                      715 TADZHIK SSR
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194   9137 F2 71   7 24 2441157 39.5 N   70.7 E 48 715 33.  33     94
.1        2.4 11 56 55.7 11 43 34.4  9137 F2      71/07/24    244
1157    39.5 N    070.7 E    5.6
               33      94.1        2.4    11-56-55.7    11-43-34.4
OBMMSQIIOL                                              48 HINDU KUS
H AND PAMIR                  715 TADZHIK SSR

194   9137 F3 71   7 24 2441157 39.5 N   70.7 E 48 715 33.  33     94
.1        2.4 11 56 55.7 11 43 34.4  9137 F3      71/07/24    244
1157    39.5 N    070.7 F    5.6
               33      94.1        2.4    11-56-55.7    11-43-34.4
OBMMSQIIOL                                              48 HINDU KUS
H AND PAMIR                  715 TADZHIK SSR

194   9137 F4 71   7 24 2441157 39.5 N   70.7 E 48 715 33.  33     94
.1        2.4 11 56 55.7 11 43 34.4  9137 F4      71/07/24    244
1157    39.5 N    070.7 F    5.6
               33      94.1        2.4    11-56-55.7    11-43-34.4
OBMMSQIIOL                                              48 HINDU KUS
H AND PAMIR                  715 TADZHIK SSR

195   9138 BM 71   7 25 2441158 36.4 N   70.7 E 53 718213. 213     97
.2        2.5  1 28 43.8  1 15  8.2  9138 BM      71/07/25    244
1158    36.4 N    070.7 E    4.5
             213      97.2        2.5    01-28-43.8    01-15-08.2
WQOLOVHROS                                              53 G REG = 7
18 AND D GT 70               718 HINDU KUSH REGION

195   9138 F1 71   7 25 2441158 36.4 N   70.7 E 53 718213. 213     97
.2        2.5  1 28 43.8  1 15  8.2  9138 F1      71/07/25    244
1158    36.4 N    070.7 F    4.5
             213      97.2        2.5    01-28-43.8    01-15-08.2
WQOLOVHROS                                              53 G REG = 7
18 AND D GT 70               718 HINDU KUSH REGION

195   9138 F2 71   7 25 2441158 36.4 N   70.7 E 53 718213. 213     97
.2        2.5  1 28 43.8  1 15  8.2  9138 F2      71/07/25    244
1158    36.4 N    070.7 F    4.5
             213      97.2        2.5    01-28-43.8    01-15-08.2
WQOLOVHROS                                              53 G REG = 7
18 AND D GT 70               718 HINDU KUSH REGION

195   9138 F3 71   7 25 2441158 36.4 N   70.7 E 53 718213. 213     97
.2        2.5  1 28 43.8  1 15  8.2  9138 F3      71/07/25    244
1158    36.4 N    070.7 F    4.5
             213      97.2        2.5    01-28-43.8    01-15-08.2
WQOLOVHROS                                              53 G REG = 7
18 AND D GT 70               718 HINDU KUSH REGION

195   9138 F4 71   7 25 2441158 36.4 N   70.7 E 53 718213. 213     97
.2        2.5  1 28 43.8  1 15  8.2  9138 F4      71/07/25    244
1158    36.4 N    070.7 F    4.5
             213      97.2        2.5    01-28-43.8    01-15-08.2
WQOLOVHROS                                              53 G REG = 7
18 AND D GT 70               718 HINDU KUSH REGION

196   9362 BM 72   1   2 2441319 41.8 N   84.5 E 27 321 33.  33     91
.3    352.0 10 40 38.8 10 27 30.4  9362 BM      72/01/02    244
1319    41.8 N    084.5 E    5.2
               33      91.3     352.0    10-40-38.8    10-27-30.4
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QSLIJGGU00                                              27 SOUTHERN
SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHINA

196  9362 F1 72  1  2 2441319 41.8 N  84.5 E 27 321 33.  33     91
.3    352.0 10 40 38.8 10 27 30.4  9362 F1     72/01/02   244
1319   41.8 N   084.5 E   5.2
             33    91.3    352.0   10-40-38.8   10-27-30.4
QSLIJGGU00                                              27 SOUTHERN
SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHINA

196  9362 F2 72  1  2 2441319 41.8 N  84.5 E 27 321 33.  33     91
.3    352.0 10 40 38.8 10 27 30.4  9362 F2     72/01/02   244
1319   41.8 N   084.5 E   5.2
             33    91.3    352.0   10-40-38.8   10-27-30.4
QSLIJGGU00                                              27 SOUTHERN
SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHINA

196  9362 F3 72  1  2 2441319 41.8 N  84.5 E 27 321 33.  33     91
.3    352.0 10 40 38.8 10 27 30.4  9362 F3     72/01/02   244
1319   41.8 N   084.5 E   5.2
             33    91.3    352.0   10-40-38.8   10-27-30.4
QSLIJGGU00                                              27 SOUTHERN
SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHINA

196  9362 F4 72  1  2 2441319 41.8 N  84.5 E 27 321 33.  33     91
.3    352.0 10 40 38.8 10 27 30.4  9362 F4     72/01/02   244
1319   41.8 N   084.5 E   5.2
             33    91.3    352.0   10-40-38.8   10-27-30.4
QSLIJGGU00                                              27 SOUTHERN
SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CHINA

197  9365 BM 72  1  6 2441323 40.7 N  72.4 E 48 716 33.  33     92
.9      1.0  6 43 47.0  6 30 30.5  9365 BM     72/01/06   244
1323   40.7 N   072.4 E   4.7
             33    92.9      1.0   06-43-47.0   06-30-30.5
QG7BHOTLFS                                              48 HINDU KUS
H AND PAMIR               716 KIRGIZ SSR

197  9365 F1 72  1  6 2441323 40.7 N  72.4 E 48 716 33.  33     92
.9      1.0  6 43 47.0  6 30 30.5  9365 F1     72/01/06   244
1323   40.7 N   072.4 E   4.7
             33    92.9      1.0   06-43-47.0   06-30-30.5
QG7BHOTLFS                                              48 HINDU KUS
H AND PAMIR               716 KIRGIZ SSR

197  9365 F2 72  1  6 2441323 40.7 N  72.4 E 48 716 33.  33     92
.9      1.0  6 43 47.0  6 30 30.5  9365 F2     72/01/06   244
1323   40.7 N   072.4 E   4.7
             33    92.9      1.0   06-43-47.0   06-30-30.5
QG7BHOTLFS                                              48 HINDU KUS
H AND PAMIR               716 KIRGIZ SSR

197  9365 F3 72  1  6 2441323 40.7 N  72.4 E 48 716 33.  33     92
.9      1.0  6 43 47.0  6 30 30.5  9365 F3     72/01/06   244
1323   40.7 N   072.4 E   4.7
             33    92.9      1.0   06-43-47.0   06-30-30.5
QG7BHOTLFS                                              48 HINDU KUS
H AND PAMIR               716 KIRGIZ SSR

197  9365 F4 72  1  6 2441323 40.7 N  72.4 E 48 716 33.  33     92
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```
.9      1.0  6 43 47.0  6 30 30.5  9365 F4     72/01/06    244
1323    40.7 N    072.4 F    4.7
             33      92.9         1.0   06-43-47.0    06-30-30.5
QGZBHOTLFS                                              48 HINDU KUS
H AND PAMIR                  716 KIRGIZ SSR

198  9370 BM 72  1 12 2441329 27.5 N  33.7 E 37 553 54.  54    97
.7      35.2  8 29 16.4  8 15 38.6  9370 BM     72/01/12    244
1329    27.5 N    033.7 F    5.1
             54      97.7        35.2   08-29-16.4    08-15-38.6
QSLZIGJZBG                                              37 AFRICA
                             553 UNITED ARAB REPUBLIC

198  9370 F1 72  1 12 2441329 27.5 N  33.7 E 37 553 54.  54    97
.7      35.2  8 29 16.4  8 15 38.6  9370 F1     72/01/12    244
1329    27.5 N    033.7 E    5.1
             54      97.7        35.2   08-29-16.4    08-15-38.6
QSLZIGJZBG                                              37 AFRICA
                             553 UNITED ARAB REPUBLIC

198  9370 F2 72  1 12 2441329 27.5 N  33.7 E 37 553 54.  54    97
.7      35.2  8 29 16.4  8 15 38.6  9370 F2     72/01/12    244
1329    27.5 N    033.7 E    5.1
             54      97.7        35.2   08-29-16.4    08-15-38.6
QSLZIGJZBG                                              37 AFRICA
                             553 UNITED ARAB REPUBLIC

198  9370 F3 72  1 12 2441329 27.5 N  33.7 E 37 553 54.  54    97
.7      35.2  8 29 16.4  8 15 38.6  9370 F3     72/01/12    244
1329    27.5 N    033.7 E    5.1
             54      97.7        35.2   08-29-16.4    08-15-38.6
QSLZIGJZBG                                              37 AFRICA
                             553 UNITED ARAB REPUBLIC

198  9370 F4 72  1 12 2441329 27.5 N  33.7 E 37 553 54.  54    97
.7      35.2  8 29 16.4  8 15 38.6  9370 F4     72/01/12    244
1329    27.5 N    033.7 E    5.1
             54      97.7        35.2   08-29-16.4    08-15-38.6
QSLZIGJZBG                                              37 AFRICA
                             553 UNITED ARAB REPUBLIC

199  9457 BM 72  1 14 2441331 37.2 N  71.5 E 48 717113. 113    96
.4      1.8  2 16 23.7  2  2 51.8  9457 BM     72/01/14    244
1331    37.2 N    071.5 F    4.5
            113      96.4         1.8   02-16-23.7    02-02-51.8
DQLTMJFKZP                                              48 HINDU KUS
H AND PAMIR                  717 AFGHANISTAN-USSR BORDER REGION

199  9457 F1 72  1 14 2441331 37.2 N  71.5 E 48 717113. 113    96
.4      1.8  2 16 23.7  2  2 51.8  9457 F1     72/01/14    244
1331    37.2 N    071.5 E    4.5
            113      96.4         1.8   02-16-23.7    02-02-51.8
DGLTMJFKZP                                              48 HINDU KUS
H AND PAMIR                  717 AFGHANISTAN-USSR BORDER REGION

199  9457 F2 72  1 14 2441331 37.2 N  71.5 E 48 717113. 113    96
.4      1.8  2 16 23.7  2  2 51.8  9457 F2     72/01/14    244
1331    37.2 N    071.5 E    4.5
            113      96.4         1.8   02-16-23.7    02-02-51.8
DQLTMJFKZP                                              48 HINDU KUS
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H AND PAMIR                717 AFGHANISTAN-USSR BORDER REGION

199  9457 F3 72  1 14 2441331 37.2 N  71.5 E 48 717113. 113    96
.4     1.8  2 16 23.7  2  2 51.8  9457 F3     72/01/14   244
1331   37.2 N   071.5 E   4.5
          113    96.4      1.8   02-16-23.7   02-02-51.8
DQLIMJFKZP                                          48 HINDU KUS
H AND PAMIR                717 AFGHANISTAN-USSR BORDER REGION

199  9457 F4 72  1 14 2441331 37.2 N  71.5 E 48 717113. 113    96
.4     1.8  2 16 23.7  2  2 51.8  9457 F4     72/01/14   244
1331   37.2 N   071.5 E   4.5
          113    96.4      1.8   02-16-23.7   02-02-51.8
DQLIMJFKZP                                          48 HINDU KUS
H AND PAMIR                717 AFGHANISTAN-USSR BORDER REGION

200  9374 BM 72  1 18 2441335 37.6 N  48.7 E 29 345 33.  33    93
.0     19.6 21 25 13.8 21 11 56.6  9374 BM     72/01/18   244
1335   37.6 N   048.7 E   4.9
          33    93.0      19.6   21-25-13.8   21-11-56.6
IDVQBILMGR                                          29 WESTERN A
SIA                        345 NORTHWESTERN IRAN

200  9374 F1 72  1 18 2441335 37.6 N  48.7 E 29 345 33.  33    93
.0     19.6 21 25 13.8 21 11 56.6  9374 F1     72/01/18   244
1335   37.6 N   048.7 E   4.9
          33    93.0      19.6   21-25-13.8   21-11-56.6
IDVQBILMGR                                          29 WESTERN A
SIA                        345 NORTHWESTERN IRAN

200  9374 F2 72  1 18 2441335 37.6 N  48.7 E 29 345 33.  33    93
.0     19.6 21 25 13.8 21 11 56.6  9374 F2     72/01/18   244
1335   37.6 N   048.7 E   4.9
          33    93.0      19.6   21-25-13.8   21-11-56.6
IDVQBILMGR                                          29 WESTERN A
SIA                        345 NORTHWESTERN IRAN

200  9374 F3 72  1 18 2441335 37.6 N  48.7 E 29 345 33.  33    93
.0     19.6 21 25 13.8 21 11 56.6  9374 F3     72/01/18   244
1335   37.6 N   048.7 E   4.9
          33    93.0      19.6   21-25-13.8   21-11-56.6
IDVQBILMGR                                          29 WESTERN A
SIA                        345 NORTHWESTERN IRAN

200  9374 F4 72  1 18 2441335 37.6 N  48.7 E 29 345 33.  33    93
.0     19.6 21 25 13.8 21 11 56.6  9374 F4     72/01/18   244
1335   37.6 N   048.7 E   4.9
          33    93.0      19.6   21-25-13.8   21-11-56.6
IDVQBILMGR                                          29 WESTERN A
SIA                        345 NORTHWESTERN IRAN

201
201  9462 BM 72  1 20 2441337 60.7 N-153.2 W  1   2138. 138
  30.4   314.8  9 30 24.6  9 24  8.5  9462 BM     72/01/20
 2441337   60.7 N   153.2 W   4.6
            138    30.4    314.8   09-30-24.6   09-24-08.
5   LMWFYGWCGK                                         1 ALASK
A - ALEUTIAN ARC               2 SOUTHERN ALASKA

201  9462 F1 72  1 20 2441337 60.7 N-153.2 W  1   2138. 138
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   30.4    314.8   9 30 24.6   9 24   8.5   9462 F1     72/01/20
  2441337    60.7 N    153.2 W    4.6
                 138      30.4     314.8   09-30-24.6   09-24-08
.5    LMWFYQWCGK                                          1 ALAS
KA - ALEUTIAN ARC                 2 SOUTHERN ALASKA

201  9462 F2 72  1 20 2441337 60.7 N-153.2 W  1   2138. 138
   30.4    314.8   9 30 24.6   9 24   8.5   9462 F2     72/01/20
  2441337    60.7 N    153.2 W    4.6
                 138      30.4     314.8   09-30-24.6   09-24-08
.5    LMWFYQWCGK                                          1 ALAS
KA - ALEUTIAN ARC                 2 SOUTHERN ALASKA

201  9462 F3 72  1 20 2441337 60.7 N-153.2 W  1   2138. 138
   30.4    314.8   9 30 24.6   9 24   8.5   9462 F3     72/01/20
  2441337    60.7 N    153.2 W    4.6
                 138      30.4     314.8   09-30-24.6   09-24-08
.5    LMWFYQWCGK                                          1 ALAS
KA - ALEUTIAN ARC                 2 SOUTHERN ALASKA

201  9462 F4 72  1 20 2441337 60.7 N-153.2 W  1   2138. 138
   30.4    314.8   9 30 24.6   9 24   8.5   9462 F4     72/01/20
  2441337    60.7 N    153.2 W    4.6
                 138      30.4     314.8   09-30-24.6   09-24-08
.5    LMWFYQWCGK                                          1 ALAS
KA - ALEUTIAN ARC                 2 SOUTHERN ALASKA

202  9463 BM 72  1 20 2441337 36.4 N  70.7 E 53 718213. 213
   97.2       2.5 11 49 38.3 11 36  2.7   9463 BM     72/01/20
  2441337    36.4 N    070.7 E    6.0
                 213      97.2        2.5    11-49-38.3   11-36-02
.7    CCMDRZMQVL                                         53 G RF
G = 718 AND D GT 70           718 HINDU KUSH REGION

202  9463 F1 72  1 20 2441337 36.4 N  70.7 E 53 718213. 213
   97.2       2.5 11 49 38.3 11 36  2.7   9463 F1     72/01/20
  2441337    36.4 N    070.7 E    6.0
                 213      97.2        2.5    11-49-38.3   11-36-02
.7    CCMDRZMQVL                                         53 G RF
G = 718 AND D GT 70           718 HINDU KUSH REGION

202  9463 F2 72  1 20 2441337 36.4 N  70.7 E 53 718213. 213
   97.2       2.5 11 49 38.3 11 36  2.7   9463 F2     72/01/20
  2441337    36.4 N    070.7 E    6.0
                 213      97.2        2.5    11-49-38.3   11-36-02
.7    CCMDRZMQVL                                         53 G RF
G = 718 AND D GT 70           718 HINDU KUSH REGION

202  9463 F2 72  1 20 2441337 36.4 N  70.7 E 53 718213. 213
   97.2       2.5 11 49 38.3 11 36  2.7   9463 F2     72/01/20
  2441337    36.4 N    070.7 E    6.0
                 213      97.2        2.5    11-49-38.3   11-36-02
.7    CCMDRZMQVL                                         53 G RF
G = 718 AND D GT 70           718 HINDU KUSH REGION

202  9463 F3 72  1 20 2441337 36.4 N  70.7 E 53 718213. 213
   97.2       2.5 11 49 38.3 11 36  2.7   9463 F3     72/01/20
  2441337    36.4 N    070.7 E    6.0
                 213      97.2        2.5    11-49-38.3   11-36-02
.7    CCMDRZMQVL                                         53 G RF
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AD-A107 584   NAVAL POSTGRADUATE SCHOOL MONTEREY CA   F/G 17/10

APPLICATION OF ACOUSTIC SIGNAL PROCESSING TECHNIQUES TO SEISMIC--ETC(U)

JUN 77 C E IRVINE

UNCLASSIFIED NPS-52IR77061   NL

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G = 718 AND D GT 70            718 HINDU KUSH REGION

203  9479 BM 72  1 23 2441340 43.5 N-127.0 W  3  30 33.  33
   15.0    265.3 10 44 12.5 10 40 37.4  9479 BM    72/01/23
  2441340    43.5 N    127.0 W    4.8
                  33      15.0      265.3   10-44-12.5   10-40-37
.4   QLUPMZDGVH                                            3 CALI
FORNIA - NEVADA REGION          30 OFF COAST OF OREGON

203  9479 F1 72  1 23 2441340 43.5 N-127.0 W  3  30 33.  33
   15.0    265.3 10 44 12.5 10 40 37.4  9479 F1    72/01/23
  2441340    43.5 N    127.0 W    4.8
                  33      15.0      265.3   10-44-12.5   10-40-37
.4   QLUPMZDGVH                                            3 CALI
FORNIA - NEVADA REGION          30 OFF COAST OF OREGON

203  9479 F2 72  1 23 2441340 43.5 N-127.0 W  3  30 33.  33
   15.0    265.3 10 44 12.5 10 40 37.4  9479 F2    72/01/23
  2441340    43.5 N    127.0 W    4.8
                  33      15.0      265.3   10-44-12.5   10-40-37
.4   QLUPMZDGVH                                            3 CALI
FORNIA - NEVADA REGION          30 OFF COAST OF OREGON

203  9479 F3 72  1 23 2441340 43.5 N-127.0 W  3  30 33.  33
   15.0    265.3 10 44 12.5 10 40 37.4  9479 F3    72/01/23
  2441340    43.5 N    127.0 W    4.8
                  33      15.0      265.3   10-44-12.5   10-40-37
.4   QLUPMZDGVH                                            3 CALI
FORNIA - NEVADA REGION          30 OFF COAST OF OREGON

203  9479 F4 72  1 23 2441340 43.5 N-127.0 W  3  30 33.  33
   15.0    265.3 10 44 12.5 10 40 37.4  9479 F4    72/01/23
  2441340    43.5 N    127.0 W    4.8
                  33      15.0      265.3   10-44-12.5   10-40-37
.4   QLUPMZDGVH                                            3 CALI
FORNIA - NEVADA REGION          30 OFF COAST OF OREGON

204  9471 BM 72  1 25 2441342 35.6 N   69.8 E 48 718 33.  33
   97.9       3.3  6 11 13.2  5 57 34.6  9471 BM    72/01/25
  2441342   35.6 N    069.8 E    3.5
                  33      97.9        3.3   06-11-13.2   05-57-34
.6   TLQPVRDQFT                                           48 HIND
U KUSH AND PAMIR              718 HINDU KUSH REGION

204  9471 F1 72  1 25 2441342 35.6 N   69.8 E 48 718 33.  33
   97.9       3.3  6 11 13.2  5 57 34.6  9471 F1    72/01/25
  2441342   35.6 N    069.8 E    3.5
                  33      97.9        3.3   06-11-13.2   05-57-34
.6   TLQPVRDQFT                                           48 HIND
U KUSH AND PAMIR              718 HINDU KUSH REGION

204  9471 F2 72  1 25 2441342 35.6 N   69.8 E 48 718 33.  33
   97.9       3.3  6 11 13.2  5 57 34.6  9471 F2    72/01/25
  2441342   35.6 N    069.8 E    3.5
                  33      97.9        3.3   06-11-13.2   05-57-34
.6   TLQPVRDQFT                                           48 HIND
U KUSH AND PAMIR              718 HINDU KUSH REGION

204  9471 F3 72  1 25 2441342 35.6 N   69.8 E 48 718 33.  33
   97.9       3.3  6 11 13.2  5 57 34.6  9471 F3    72/01/25
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  2441342   35.6 N   069.8 E   3.5
                  33      97.9       3.3   06-11-13.2   05-57-34
.6   TLQPVRDOFI                                          48 HIND
U KUSH AND PAMIR                718 HINDU KUSH REGION

204  9471 F4 72   1 25 2441342 35.6 N  69.8 E 48 718 33.  33
   97.9       3.3  6 11 13.2  5 57 34.6  9471 F4    72/01/25
  2441342   35.6 N   069.8 E   3.5
                  33      97.9       3.3   06-11-13.2   05-57-34
.6   TLQPVRDOFI                                          48 HIND
U KUSH AND PAMIR                718 HINDU KUSH REGION

205  9690 BM 72   2   3 2441351 40.7 N  48.4 E 29 337 33.  33
   90.0      19.0  3 21 11.3  3  8  8.2  9690 BM    72/02/03
  2441351   40.7 N   048.4 E   3.4
                  33      90.0      19.0   03-21-11.3   03-08-08
.2   DQTHUSYMBL                                          29 WEST
ERN ASIA                        337 EASTERN CAUCASUS

205  9690 F1 72   2   3 2441351 40.7 N  48.4 E 29 337 33.  33
   90.0      19.0  3 21 11.3  3  8  8.2  9690 F1    72/02/03
  2441351   40.7 N   048.4 E   3.4
                  33      90.0      19.0   03-21-11.3   03-08-08
.2   DQTHUSYMBL                                          29 WEST
ERN ASIA                        337 EASTERN CAUCASUS

205  9690 F2 72   2   3 2441351 40.7 N  48.4 E 29 337 33.  33
   90.0      19.0  3 21 11.3  3  8  8.2  9690 F2    72/02/03
  2441351   40.7 N   048.4 E   3.4
                  33      90.0      19.0   03-21-11.3   03-08-08
.2   DQTHUSYMBL                                          29 WEST
ERN ASIA                        337 EASTERN CAUCASUS

205  9690 F3 72   2   3 2441351 40.7 N  48.4 E 29 337 33.  33
   90.0      19.0  3 21 11.3  3  8  8.2  9690 F3    72/02/03
  2441351   40.7 N   048.4 E   3.4
                  33      90.0      19.0   03-21-11.3   03-08-08
.2   DQTHUSYMBL                                          29 WEST
ERN ASIA                        337 EASTERN CAUCASUS

205  9690 F4 72   2   3 2441351 40.7 N  48.4 E 29 337 33.  33
   90.0      19.0  3 21 11.3  3  8  8.2  9690 F4    72/02/03
  2441351   40.7 N   048.4 E   3.4
                  33      90.0      19.0   03-21-11.3   03-08-08
.2   DQTHUSYMBL                                          29 WEST
ERN ASIA                        337 EASTERN CAUCASUS

206  9706 BM 72   2 22 2441370 36.4 N  70.6 E 53 718212. 212
   97.2       2.6  1 27 57.0  1 14 21.4  9706 BM    72/02/22
  2441370   36.4 N   070.6 E   5.3
                 212      97.2       2.6   01-27-57.0   01-14-21
.4   DOOYZMZFQL                                          53 G RE
G = 718 AND D GT 70             718 HINDU KUSH REGION

206  9706 F1 72   2 22 2441370 36.4 N  70.6 E 53 718212. 212
   97.2       2.6  1 27 57.0  1 14 21.4  9706 F1    72/02/22
  2441370   36.4 N   070.6 E   5.3
                 212      97.2       2.6   01-27-57.0   01-14-21
.4   DOOYZMZFQL                                          53 G RE
G = 718 AND D GT 70             718 HINDU KUSH REGION
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206  9706 F2 72  2 22 2441370 36.4 N  70.6 E 53 718212. 212
   97.2      2.6  1 27 57.0  1 14 21.4  9706 F2    72/02/22
  2441370   36.4 N   070.6 E   5.3
                212    97.2       2.6   01-27-57.0   01-14-21
.4   DOOYZMZFQL                                      53 G RE
G = 718 AND D GT 70          718 HINDU KUSH REGION

206  9706 F3 72  2 22 2441370 36.4 N  70.6 E 53 718212. 212
   97.2      2.6  1 27 57.0  1 14 21.4  9706 F3    72/02/22
  2441370   36.4 N   070.6 E   5.3
                212    97.2       2.6   01-27-57.0   01-14-21
.4   DOOYZMZFQL                                      53 G RF
G = 718 AND D GT 70          718 HINDU KUSH REGION

206  9706 F4 72  2 22 2441370 36.4 N  70.6 E 53 718212. 212
   97.2      2.6  1 27 57.0  1 14 21.4  9706 F4    72/02/22
  2441370   36.4 N   070.6 E   5.3
                212    97.2       2.6   01-27-57.0   01-14-21
.4   DOOYZMZFQL                                      53 G RF
G = 718 AND D GT 70          718 HINDU KUSH REGION

207  9712 BM 72  2 26 2441374 50.6 N  97.3 E 28 333 33.  33
   80.9   345.1 23 43 22.4 23 31  4.9  9712 BM    72/02/26
  2441374   50.6 N   097.3 E   5.3
                 33    80.9     345.1   23-43-22.4   23-31-04
.9   GRTLQPEPFR                                      28 ALMA
-ATA TO LAKE BAIKAL          333 USSR-MONGOLIA BORDER REGION

207  9712 F1 72  2 26 2441374 50.6 N  97.3 E 28 333 33.  33
   80.9   345.1 23 43 22.4 23 31  4.9  9712 F1    72/02/26
  2441374   50.6 N   097.3 E   5.3
                 33    80.9     345.1   23-43-22.4   23-31-04
.9   GRTLQPEPFR                                      28 ALMA
-ATA TO LAKE BAIKAL          333 USSR-MONGOLIA BORDER REGION

207  9712 F2 72  2 26 2441374 50.6 N  97.3 E 28 333 33.  33
   80.9   345.1 23 43 22.4 23 31  4.9  9712 F2    72/02/26
  2441374   50.6 N   097.3 E   5.3
                 33    80.9     345.1   23-43-22.4   23-31-04
.9   GRTLQPEPFR                                      28 ALMA
-ATA TO LAKE BAIKAL          333 USSR-MONGOLIA BORDER REGION

207  9712 F3 72  2 26 2441374 50.6 N  97.3 E 28 333 33.  33
   80.9   345?1 23 43 22.4 23 31  4.9  9712 F3    72/02/26
  2441374   50.6 N   097.3 E   5.3
                 33    80.9     345.1   23-43-22.4   23-31-04
.9   GRTLQPEPFR                                      28 ALMA
-ATA TO LAKE BAIKAL          333 USSR-MONGOLIA BORDER REGION

207  9712 F4 72  2 26 2441374 50.6 N  97.3 E 28 333 33.  33
   80.9   345.1 23 43 22.4 23 31  4.9  9712 F4    72/02/26
  2441374   50.6 N   097.3 E   5.3
                 33    80.9     345.1   23-43-22.4   23-31-04
.9   GRTLQPEPFR                                      28 ALMA
-ATA TO LAKE BAIKAL          333 USSR-MONGOLIA BORDER REGION

208  9790 BM 72  3  4 2441381 38.3 N  74.0 E 48 719130. 130
   95.3   359.8 18 37 21.8 18 23 54.6  9790 BM    72/03/04
  2441381   38.3 N   074.0 E   5.1
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                130     95.3     359.8   18-37-21.8   18-23-54
.6   KLQCRPZUTD                                        48 HIND
U KUSH AND PAMIR                 719 TADZHIK-SINKIANG BORDER REG
ION
208  9790 F1 72  3  4 2441381 38.3 N  74.0 E 48 719130. 130
   95.3   359.8 18 37 21.8 18 23 54.6  9790 F1     72/03/04
  2441381    38.3 N    074.0 E    5.1
                130     95.3     359.8   18-37-21.8   18-23-54
.6   KLQCRPZUTD                                        48 HIND
U KUSH AND PAMIR                 719 TADZHIK-SINKIANG BORDER REG
ION
208  9790 F2 72  3  4 2441381 38.3 N  74.0 E 48 719130. 130
   95.3   359.8 18 37 21.8 18 23 54.6  9790 F2     72/03/04
  2441381    38.3 N    074.0 E    5.1
                130     95.3     359.8   18-37-21.8   18-23-54
.6   KLQCRPZUTD                                        48 HIND
U KUSH AND PAMIR                 719 TADZHIK-SINKIANG BORDER REG
ION
208  9790 F3 72  3  4 2441381 38.3 N  74.0 E 48 719130. 130
   95.3   359.8 18 37 21.8 18 23 54.6  9790 F3     72/03/04
  2441381    38.3 N    074.0 E    5.1
                130     95.3     359.8   18-37-21.8   18-23-54
.6   KLQCRPZUTD                                        48 HIND
U KUSH AND PAMIR                 719 TADZHIK-SINKIANG BORDER REG
ION
208  9790 F4 72  3  4 2441381 38.3 N  74.0 E 48 719130. 130
   95.3   359.8 18 37 21.8 18 23 54.6  9790 F4     72/03/04
  2441381    38.3 N    074.0 E    5.1
                130     95.3     359.8   18-37-21.8   18-23-54
.6   KLQCRPZUTD                                        48 HIND
U KUSH AND PAMIR                 719 TADZHIK-SINKIANG BORDER REG
ION
209  9729 BM 72  3 17 2441394 40.1 N  69.7 E 48 715 26.  26
   93.4      3.1  9 30 25.4  9 17  6.7  9729 BM     72/03/17
  2441394    40.1 N    069.7 E    5.2
                 26     93.4       3.1   09-30-25.4   09-17-06
.7   EUPKZQFLSB                                        48 HIND
U KUSH AND PAMIR                 715 TADZHIK SSR

209  9729 F1 72  3 17 2441394 40.1 N  69.7 E 48 715 26.  26
   93.4      3.1  9 30 25.4  9 17  6.7  9729 F1     72/03/17
  2441394    40.1 N    069.7 E    5.2
                 26     93.4       3.1   09-30-25.4   09-17-06
.7   EUPKZQFLSB                                        48 HIND
U KUSH AND PAMIR                 715 TADZHIK SSR

209  9729 F2 72  3 17 2441394 40.1 N  69.7 E 48 715 26.  26
   93.4      3.1  9 30 25.4  9 17  6.7  9729 F2     72/03/17
  2441394    40.1 N    069.7 E    5.2
                 26     93.4       3.1   09-30-25.4   09-17-06
.7   EUPKZQFLSB                                        48 HIND
U KUSH AND PAMIR                 715 TADZHIK SSR

209  9729 F3 72  3 17 2441394 40.1 N  69.7 E 48 715 26.  26
   93.4      3.1  9 30 25.4  9 17  6.7  9729 F3     72/03/17
  2441394    40.1 N    069.7 E    5.2
                 26     93.4       3.1   09-30-25.4   09-17-06
.7   EUPKZQFLSB                                        48 HIND
U KUSH AND PAMIR                 715 TADZHIK SSR
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209  9729 F4 72  3 17 2441394 40.1 N  69.7 E 48 715 26.  26
   93.4     3.1  9 30 25.4  9 17  6.7  9729 F4    72/03/17
  2441394   40.1 N   069.7 E    5.2
                  26     93.4      3.1   09-30-25.4   09-17-06
.7   EUPKZQFLSR                                       48 HIND
U KUSH AND PAMIR               715 TADZHIK SSR

210  9731 BM 72  3 20 2441397 51.3 N-179.7 W  1    7 46.  46
   46.6   304.1 23 40 11.8 23 31 40.4  9731 BM    72/03/20
  2441397   51.3 N   179.7 W    6.0
                  46     46.6    304.1   23-40-11.8   23-31-40
.4   TLCHCRJEQM                                        1 ALAS
KA - ALEUTIAN ARC                 7 ANDREANOF ISLANDS, ALEUTIAN
 IS.
210  9731 F1 72  3 20 2441397 51.3 N-179.7 W  1    7 46.  46
   46.6   304.1 23 40 11.8 23 31 40.4  9731 F1    72/03/20
  2441397   51.3 N   179.7 W    6.0
                  46     46.6    304.1   23-40-11.8   23-31-40
.4   TLCHCRJEQM                                        1 ALAS
KA - ALEUTIAN ARC                 7 ANDREANOF ISLANDS, ALEUTIAN
 IS.
210  9731 F2 72  3 20 2441397 51.3 N-179.7 W  1    7 46.  46
   46.6   304.1 23 40 11.8 23 31 40.4  9731 F2    72/03/20
  2441397   51.3 N   179.7 W    6.0
                  46     46.6    304.1   23-40-11.8   23-31-40
.4   TLCHCRJEQM                                        1 ALAS
KA - ALEUTIAN ARC                 7 ANDREANOF ISLANDS, ALEUTIAN
 IS.
210  9731 F3 72  3 20 2441397 51.3 N-179.7 W  1    7 46.  46
   46.6   304.1 23 40 11.8 23 31 40.4  9731 F3    72/03/20
  2441397   51.3 N   179.7 W    6.0
                  46     46.6    304.1   23-40-11.8   23-31-40
.4   TLCHCRJEQM                                        1 ALAS
KA - ALEUTIAN ARC                 7 ANDREANOF ISLANDS, ALEUTIAN
 IS.
210  9731 F4 72  3 20 2441397 51.3 N-179.7 W  1    7 46.  46
   46.6   304.1 23 40 11.8 23 31 40.4  9731 F4    72/03/20
  2441397   51.3 N   179.7 W    6.0
                  46     46.6    304.1   23-40-11.8   23-31-40
.4   TLCHCRJEQM                                        1 ALAS
KA - ALEUTIAN ARC                 7 ANDREANOF ISLANDS, ALEUTIAN
 IS.
211  9742 BM 72  4  2 2441410 36.1 N  73.6 E 48 720 47.  47
   97.5       .1  3 47 58.2  3 34 21.2  9742 BM    72/04/02
  2441410   36.1 N   073.6 E    5.0
                  47     97.5       .1   03-47-58.2   03-34-21
.2   SQGRLHVTSR                                       48 HIND
U KUSH AND PAMIR               720 NORTHWESTERN KASHMIR

211  9742 F1 72  4  2 2441410 36.1 N  73.6 E 48 720 47.  47
   97.5       .1  3 47 58.2  3 34 21.2  9742 F1    72/04/02
  2441410   36.1 N   073.6 E    5.0
                  47     97.5       .1   03-47-58.2   03-34-21
.2   SQGRLHVTSR                                       48 HIND
U KUSH AND PAMIR               720 NORTHWESTERN KASHMIR

211  9742 F2 72  4  2 2441410 36.1 N  73.6 E 48 720 47.  47
   97.5       .1  3 47 58.2  3 34 21.2  9742 F2    72/04/02
  2441410   36.1 N   073.6 E    5.0
                  47     97.5       .1   03-47-58.2   03-34-21
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.2   SQGRLHVTSP                                          48 HIND
U KUSH AND PAMIR                    720 NORTHWESTERN KASHMIR

211  9742 F3 72  4  2 2441410 36.1 N  73.6 E 48 720 47.  47
    97.5       .1  3 47 58.2  3 34 21.2  9742 F3    72/04/02
  2441410   36.1 N   073.6 E   5.0
                 47    97.5        .1  03-47-58.2  03-34-21
.2   SQGRLHVTSR                                          48 HIND
U KUSH AND PAMIR                    720 NORTHWESTERN KASHMIR

211  9742 F4 72  4  2 2441410 36.1 N  73.6 E 48 720 47.  47
    97.5       .1  3 47 58.2  3 34 21.2  9742 F4    72/04/02
  2441410   36.1 N   073.6 E   5.0
                 47    97.5        .1  03-47-58.2  03-34-21
.2   SQGRLHVTSR                                          48 HIND
U KUSH AND PAMIR                    720 NORTHWESTERN KASHMIR

212  9748 BM 72  4  5 2441413 38.4 N  73.5 E 48 719118. 118
    95.2       .2 22 51 48.6 22 38 21.8  9748 BM    72/04/05
  2441413   38.4 N   073.5 E   5.0
                118    95.2        .2  22-51-48.6  22-38-21
.8   SULDYOGROZ                                          48 HIND
U KUSH AND PAMIR                    719 TADZHIK-SINKIANG BORDER REG
ION
212  9748 F1 72  4  5 2441413 38.4 N  73.5 E 48 719118. 118
    95.2       .2 22 51 48.6 22 38 21.8  9748 F1    72/04/05
  2441413   38.4 N   073.5 E   5.0
                118    95.2        .2  22-51-48.6  22-38-21
.8   SULDYOQROZ                                          48 HIND
U KUSH AND PAMIR                    719 TADZHIK-SINKIANG BORDER REG
ION
212  9748 F2 72  4  5 2441413 38.4 N  73.5 E 48 719118. 118
    95.2       .2 22 51 48.6 22 38 21.8  9748 F2    72/04/05
  2441413   38.4 N   073.5 E   5.0
                118    95.2        .2  22-51-48.6  22-38-21
.8   SULDYOQROZ                                          48 HIND
U KUSH AND PAMIR                    719 TADZHIK-SINKIANG BORDER REG
ION
212  9748 F3 72  4  5 2441413 38.4 NN 73.5 E 48 719118. 118
    95.2       .2 22 51 48.6 22 38 21.8  9748 F3    72/04/05
  2441413   38.4 N   073.5 E   5.0
                118    95.2        .2  22-51-48.6  22-38-21
.8   SULDYOQROZ                                          48 HIND
U KUSH AND PAMIR                    719 TADZHIK-SINKIANG BORDER REG
ION
212  9748 F4 72  4  5 2441413 38.4 N  73.5 E 48 719118. 118
    95.2       .2 22 51 48.6 22 38 21.8  9748 F4    72/04/05
  2441413   38.4 N   073.5 E   5.0
                118    95.2        .2  22-51-48.6  22-38-21
.8   SULDYOQROZ                                          48 HIND
U KUSH AND PAMIR                    719 TADZHIK-SINKIANG BORDER REG
ION
213  9754 BM 72  4  9 2441417 42.2 N  84.6 E 28 332 33.  33
    90.9    352.0  4 23 52.8  4 10 46.3  9754 BM    72/04/09
  2441417   42.2 N   084.6 E   5.9
                 33    90.9     352.0  04-23-52.8  04-10-46
.3   CRIJSUQULF                                          28 ALMA
-ATA TO LAKE BAIKAL                 332 NORTHERN SINKIANG PROV., CH
INA
213  9754 F1 72  4  9 2441417 42.2 N  84.6 E 28 332 33.  33
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    90.9   352.0  4 23 52.8  4 10 46.3  9754 F1     72/04/09
  2441417   42.2 N   084.6 E   5.9
                  33     90.9    352.0   04-23-52.8   04-10-46
.3   CBIJSUQULE                                        28 ALMA
-ATA TO LAKE BAIKAL           332 NORTHERN SINKIANG PROV., CH
INA
213  9754 F2 72  4  9 2441417 42.2 N  84.6 E 28 332 33.  33
    90.9   352.0  4 23 52.8  4 10 46.3  9754 F2     72/04/09
  2441417   42.2 N   084.6 E   5.9
                  33     90.9    352.0   04-23-52.8   04-10-46
.3   CHIJSUQULE                                        28 ALMA
-ATA TO LAKE BAIKAL           332 NORTHERN SINKIANG PROV., CH
INA
213  9754 F3 72  4  9 2441417 42.2 N  84.6 E 28 332 33.  33
    90.9   352.0  4 23 52.8  4 10 46.3  9754 F3     72/04/09
  2441417   42.2 N   084.6 E   5.9
                  33     90.9    352.0   04-23-52.8   04-10-46
.3   CBIJSUQULF                                        28 ALMA
-ATA TO LAKE BAIKAL           332 NORTHERN SINKIANG PROV., CH
INA
213  9754 F4 72  4  9 2441417 42.2 N  84.6 E 28 332 33.  33
    90.9   352.0  4 23 52.8  4 10 46.3  9754 F4     72/04/09
  2441417   42.2 N   084.6 E   5.9
                  33     90.9    352.0   04-23-52.8   04-10-46
.3   CBIJSUQULF                                        28 ALMA
-ATA TO LAKE BAIKAL           332 NORTHERN SINKIANG PROV., CH
INA
214  9767 BM 72  4 20 2441428 42.0 N  84.6 E 28 332 33.  33
    91.1   352.0  1 14 58.9  1  1 51.5  9767 BM     72/04/20
  2441428   42.0 N   084.6 E   4.3
                  33     91.1    352.0   01-14-58.9   01-01-51
.5   SQZMPFILYH                                        28 ALMA
-ATA TO LAKE BAIKAL           332 NORTHERN SINKIANG PROV., CH
INA
214  9767 F1 72  4 20 2441428 42.0 N  84.6 E 28 332 33.  33
    91.1   352.0  1 14 58.9  1  1 51.5  9767 F1     72/04/20
  2441428   42.0 N   084.6 E   4.3
                  33     91.1    352.0   01-14-58.9   01-01-51
.5   SQZMPFILYH                                        28 ALMA
-ATA TO LAKE BAIKAL           332 NORTHERN SINKIANG PROV., CH
INA
214  9767 F2 72  4 20 2441428 42.0 N  84.6 E 28 332 33.  33
    91.1   352.0  1 14 58.9  1  1 51.5  9767 F2     72/04/20
  2441428   42.0 N   084.6 E   4.3
                  33     91.1    352.0   01-14-58.9   01-01-51
.5   SQZMPFILYH                                        28 ALMA
-ATA TO LAKE BAIKAL           332 NORTHERN SINKIANG PROV., CH
INA
214  9767 F3 72  4 20 2441428 42.0 N  84.6 E 28 332 33.  33
    91.1   352.0  1 14 58.9  1  1 51.5  9767 F3     72/04/20
  2441428   42.0 N   084.6 E   4.3
                  33     91.1    352.0   01-14-58.9   01-01-51
.5   SQZMPFILYH                                        28 ALMA
-ATA TO LAKE BAIKAL           332 NORTHERN SINKIANG PROV., CH
INA
214  9767 F4 72  4 20 2441428 42.0 N  84.6 E 28 332 33.  33
    91.1   352.0  1 14 58.9  1  1 51.5  9767 F4     72/04/20
  2441428   42.0 N   084.6 E   4.3
                  33     91.1    352.0   01-14-58.9   01-01-51
.5   SQZMPFILYH                                        28 ALMA
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-ATA TO LAKE BAIKAL          332 NORTHERN SINKIANG PROV., CH
INA
215  9802 BM 72  4 28 2441436 31.3 N  85.0 E 26 306 33.  33
  101.6   350.2  2 18 38.6  2  4 43.1  9802 BM    72/04/28
  2441436   31.3 N   085.0 E   4.1
                  33   101.6    350.2   02-18-38.6   02-04-43
.1   ZGGQKTLBYI                                      26 INDI
A - TIBET - SZECHWAN - YUNAN 306 TIBET

215  9802 F1 72  4 28 2441436 31.3 N  85.0 E 26 306 33.  33
  101.6   350.2  2 18 38.6  2  4 43.1  9802 F1    72/04/28
  2441436   31.3 N   085.0 E   4.1
                  33   101.6    350.2   02-18-38.6   02-04-43
.1   ZGGQKTLBYI                                      26 INDI
A - TIBET - SZECHWAN - YUNAN 306 TIBET

215  9802 F2 72  4 28 2441436 31.3 N  85.0 E 26 306 33.  33
  101.6   350.2  2 18 38.6  2  4 43.1  9802 F2    72/04/28
  2441436   31.3 N   085.0 E   4.1
                  33   101.6    350.2   02-18-38.6   02-04-43
.1   ZGGQKTLBYI                                      26 INDI
A - TIBET - SZECHWAN - YUNAN 306 TIBET

215  9802 F3 72  4 28 2441436 31.3 N  85.0 E 26 306 33.  33
  101.6   350.2  2 18 38.6  2  4 43.1  9802 F3    72/04/28
  2441436   31.3 N   085.0 E   4.1
                  33   101.6    350.2   02-18-38.6   02-04-43
.1   ZGGQKTLBYI                                      26 INDI
A - TIBET - SZECHWAN - YUNAN 306 TIBET

215  9802 F4 72  4 28 2441436 31.3 N  85.0 E 26 306 33.  33
  101.6   350.2  2 18 38.6  2  4 43.1  9802 F4    72/04/28
  2441436   31.3 N   085.0 E   4.1
                  33   101.6    350.2   02-18-38.6   02-04-43
.1   ZGGQKTLBYI                                      26 INDI
A - TIBET - SZECHWAN - YUNAN 306 TIBET

216  2010 BM 66 12  7 2439467 43.6 N 149.6 E 19 222 35.  35
   67.9   310.6 17 28 31.0 17 17 28.7  2010 BM    66/12/07
  2439467   43.6 N   149.6 E   6.2
                  35    67.9    310.6   17-28-31.0   17-17-28
.7   DVUZUIMSLQ                                      19 JAPA
N - KURILES - KAMCHATKA       222 KURILE ISLANDS REGION

216  2010 F1 66 12  7 2439467 43.6 N 149.6 E 19 222 35.  35
   67.9   310.6 17 28 31.0 17 17 28.7  2010 BM    66/12/07
  2439467   43.6 N   149.6 E   6.2
                  35    67.9    310.6   17-28-31.0   17-17-28
.7   DVUZUIMSLQ                                      19 JAPA
N - KURILES - KAMCHATKA       222 KURILE ISLANDS REGION

216  2010 F2 66 12  7 2439467 43.6 N 149.6 E 19 222 35.  35
   67.9   310.6 17 28 31.0 17 17 28.7  2010 BM    66/12/07
  2439467   43.6 N   149.6 E   6.2
                  35    67.9    310.6   17-28-31.0   17-17-28
.7   DVUZUIMSLQ                                      19 JAPA
N - KURILES - KAMCHATKA       222 KURILE ISLANDS REGION

216  2010 F3 66 12  7 2439467 43.6 N 149.6 E 19 222 35.  35
   67.9   310.6 17 28 31.0 17 17 28.7  2010 BM    66/12/07
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 2439467    43.6 N    149.6 E    6.2
                  35     67.9     310.6    17-28-31.0    17-17-28
.7   DVUZUIMSLQ                                          19 JAPA
N - KURILES - KAMCHATKA        222 KURILE ISLANDS REGION

216  2010 F4 66 12  7 2439467 43.6 N 149.6 E 19 222 35.  35
   67.9    310.6 17 28 31.0 17 17 28.7  2010 BM     66/12/07
 2439467    43.6 N    149.6 E    6.2
                  35     67.9     310.6    17-28-31.0    17-17-28
.7   DVUZUIMSLQ                                          19 JAPA
N - KURILES - KAMCHATKA        222 KURILE ISLANDS REGION

217  2029 BM 67 10  7 2439771 49.1 N 154.4 E 19 221 33.  33
   61.7    312.7  8 38 12.9  8 27 50.5  2029 BM     67/10/07
 2439771    49.1 N    154.4 E    5.8
                  33     61.7     312.7    08-38-12.9    08-27-50
.5   HDMLHROPBQ                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

217  2029 F1 67 10  7 2439771 49.1 N 154.4 E 19 221 33.  33
   61.7    312.7  8 38 12.9  8 27 50.5  2029 BM     67/10/07
 2439771    49.1 N    154.4 E    5.8
                  33     61.7     312.7    08-38-12.9    08-27-50
.5   HDMLHROPBQ                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

217  2029 F2 67 10  7 2439771 49.1 N 154.4 E 19 221 33.  33
   61.7    312.7  8 38 12.9  8 27 50.5  2029 BM     67/10/07
 2439771    49.1 N    154.4 E    5.8
                  33     61.7     312.7    08-38-12.9    08-27-50
.5   HDMLHROPBQ                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

217  2029 F3 67 10  7 2439771 49.1 N 154.4 E 19 221 33.  33
   61.7    312.7  8 38 12.9  8 27 50.5  2029 BM     67/10/07
 2439771    49.1 N    154.4 E    5.8
                  33     61.7     312.7    08-38-12.9    08-27-50
.5   HDMLHROPBQ                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

217  2029 F4 67 10  7 2439771 49.1 N 154.4 E 19 221 33.  33
   61.7    312.7  8 38 12.9  8 27 50.5  2029 BM     67/10/07
 2439771    49.1 N    154.4 E    5.8
                  33     61.7     312.7    08-38-12.9    08-27-50
.5   HDMLHROPBQ                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

218  2030 BM 67 11  1 2439796 47.8 N 152.2 E 19 221 42.  42
   63.7    312.7 16 41 18.8 16 30 43.0  2030 BM     67/11/01
 2439796    47.8 N    152.2 E    5.8
                  42     63.7     312.7    16-41-18.8    16-30-43
.0   MPPRQUCKLS                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

218  2030 F1 67 11  1 2439796 47.8 N 152.2 E 19 221 42.  42
   63.7    312.7 16 41 18.8 16 30 43.0  2030 BM     67/11/01
 2439796    47.8 N    152.2 E    5.8
                  42     63.7     312.7    16-41-18.8    16-30-43
.0   MPPRQUCKLS                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS
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218  2030 F2 67 11  1 2439796 47.8 N 152.2 E 19 221 42.  42
   63.7    312.7 16 41 18.8 16 30 43.0  2030 BM    67/11/01
  2439796   47.8 N   152.2 F   5.8
                 42    63.7    312.7   16-41-18.8   16-30-43
.0   MPPRQUCKLS                                     19 JAPA
N - KURILES - KAMCHATKA       221 KURILF ISLANDS

218  2030 F3 67 11  1 2439796 47.8 N 152.2 E 19 221 42.  42
   63.7    312.7 16 41 18.8 16 30 43.0  2030 BM    67/11/01
  2439796   47.8 N   152.2 E   5.8
                 42    63.7    312.7   16-41-18.8   16-30-43
.0   MPPRQUCKLS                                     19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

218  2030 F4 67 11  1 2439796 47.8 N 152.2 E 19 221 42.  42
   63.7    312.7 16 41 18.8 16 30 43.0  2030 BM    67/11/01
  2439796   47.8 N   152.2 E   5.8
                 42    63.7    312.7   16-41-18.8   16-30-43
.0   MPPRQUCKLS                                     19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

219  2031 BM 67 11 30 2439825 41.7 N  21.2 E 31 383 29.  29
   80.3     37.0  7 36  4.8  7 23 50.2  2031 BM    67/11/30
  2439825   41.7 N   021.2 E   6.0
                 29    80.3     37.0   07-36-04.8   07-23-50
.2   JRGPGCBLEY                                     31 WEST
ERN MEDITERRANEAN AREA        383 YUGOSLAVIA

219  2031 F1 67 11 30 2439825 41.7 N  21.2 E 31 383 29.  29
   80.3     37.0  7 36  4.8  7 23 50.2  2031 BM    67/11/30
  2439825   41.7 N   021.2 E   6.0
                 29    80.3     37.0   07-36-04.8   07-23-50
.2   JRGPGCBLEY                                     31 WEST
ERN MEDITERRANEAN AREA        383 YUGOSLAVIA

219  2031 F2 67 11 30 2439825 41.7 N  21.2 E 31 383 29.  29
   80.3     37.0  7 36  4.8  7 23 50.2  2031 BM    67/11/30
  2439825   41.7 N   021.2 E   6.0
                 29    80.3     37.0   07-36-04.8   07-23-50
.2   JRGPGCBLEY                                     31 WEST
ERN MEDITERRANEAN AREA        383 YUGOSLAVIA

219  2031 F3 67 11 30 2439825 41.7 N  21.2 E 31 383 29.  29
   80.3     37.0  7 36  4.8  7 23 50.2  2031 BM    67/11/30
  2439825   41.7 N   021.2 E   6.0
                 29    80.3     37.0   07-36-04.8   07-23-50
.2   JRGPGCBLEY                                     31 WEST
ERN MEDITERRANEAN AREA        383 YUGOSLAVIA

219  2031 F4 67 11 30 2439825 41.7 N  21.2 E 31 383 29.  29
   80.3     37.0  7 36  4.8  7 23 50.2  2031 BM    67/11/30
  2439825   41.7 N   021.2 E   6.0
                 29    80.3     37.0   07-36-04.8   07-23-50
.2   JRGPGCBLEY                                     31 WEST
ERN MEDITERRANEAN AREA        383 YUGOSLAVIA

220  2035 BM 67 12 23 2439848 48.2 N 156.7 E 19 222 33.  33
   61.1    310.8 16 14 50.7 16  4 32.0  2035 BM    67/12/23
  2439848   48.2 N   156.7 E   5.7
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                    33      61.1     310.8    16-14-50.7    16-04-32
.0    KLWIEQZCOS                                              19 JAPA
N - KURILES - KAMCHATKA        222 KURILE ISLANDS REGION

220  2035 F1 67 12 23 2439848 48.2 N 156.7 E 19 222 33.  33
   61.1   310.8 16 14 50.7 16  4 32.0  2035 BM     67/12/23
  2439848   48.2 N   156.7 E   5.7
                    33      61.1     310.8    16-14-50.7    16-04-32
.0    KLWIEQZCOS                                              19 JAPA
N - KURILES - KAMCHATKA        222 KURILE ISLANDS REGION

220  2035 F2 67 12 23 2439848 48.2 N 156.7 E 19 222 33.  33
   61.1   310.8 16 14 50.7 16  4 32.0  2035 BM     67/12/23
  2439848   48.2 N   156.7 E   5.7
                    33      61.1     310.8    16-14-50.7    16-04-32
.0    KLWIEQZCOS                                              19 JAPA
N - KURILES - KAMCHATKA        222 KURILE ISLANDS REGION

220  2035 F3 67 12 23 2439848 48.2 N 156.7 E 19 222 33.  33
   61.1   310.8 16 14 50.7 16  4 32.0  2035 BM     67/12/23
  2439848   48.2 N   156.7 E   5.7
                    33      61.1     310.8    16-14-50.7    16-04-32
.0    KLWIEQZCOS                                              19 JAPA
N - KURILES - KAMCHATKA        222 KURILE ISLANDS REGION

220  2035 F4 67 12 23 2439848 48.2 N 156.7 E 19 222 33.  33
   61.1   310.8 16 14 50.7 16  4 32.0  2035 BM     67/12/23
  2439848   48.2 N   156.7 E   5.7
                    33      61.1     310.8    16-14-50.7    16-04-32
.0    KLWIEQZCOS                                              19 JAPA
N - KURILES - KAMCHATKA        222 KURILE ISLANDS REGION

221  2024 BM 67  5 25 2439636 45.0 N 141.1 E 51 224325. 325
   71.1   316.3 19  2 53.8 18 51 31.1  2024 BM     67/05/25
  2439636   45.0 N   141.1 E   5.2
                   325      71.1     316.3    19-02-53.8    18-51-31
.1    LKKQBDVCCY                                              51 S RE
G = 19,20 OR 41 AND D GT 300 224 HOKKAIDO, JAPAN, REGION

221  2024 F1 67  5 25 2439636 45.0 N 141.1 E 51 224325. 325
   71.1   316.3 19  2 53.8 18 51 31.1  2024 BM     67/05/25
  2439636   45.0 N   141.1 E   5.2
                   325      71.1     316.3    19-02-53.8    18-51-31
.1    LKKQBDVCCY                                              51 S RE
G = 19,20 OR 41 AND D GT 300 224 HOKKAIDO, JAPAN, REGION

221  2024 F2 67  5 25 2439636 45.0 N 141.1 E 51 224325. 325
   71.1   316.3 19  2 53.8 18 51 31.1  2024 BM     67/05/25
  2439636   45.0 N   141.1 E   5.2
                   325      71.1     316.3    19-02-53.8    18-51-31
.1    LKKQBDVCCY                                              51 S RE
G = 19,20 OR 41 AND D GT 300 224 HOKKAIDO, JAPAN, REGION

221  2024 F3 67  5 25 2439636 45.0 N 141.1 E 51 224325. 325
   71.1   316.3 19  2 53.8 18 51 31.1  2024 BM     67/05/25
  2439636   45.0 N   141.1 E   5.2
                   325      71.1     316.3    19-02-53.8    18-51-31
.1    LKKQBDVCCY                                              51 S RE
G = 19,20 OR 41 AND D GT 300 224 HOKKAIDO, JAPAN, REGION
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221  2024 F4 67   5 25 2439636 45.0 N 141.1 E 51 224325. 325
   71.1    316.3 19   2 53.8 18 51 31.1  2024 BM     67/05/25
  2439636    45.0 N    141.1 E    5.2
                 325     71.1      316.3    19-02-53.8    18-51-31
.1    LKKGHDVCCY                                          51 S RF
G = 19,20 OR 41 AND D GT 300 224 HOKKAIDO, JAPAN, REGION

222  2006 BM 66   8 19 2439357 38.8 N  41.7 E 30 366 26.  26
   90.1     24.4 12 35  9.0 12 22  5.6  2006 BM     66/08/19
  2439357    38.8 N    041.7 E    6.5
                  26     90.1      24.4    12-35-09.0    12-22-05
.6    QTETDHLUUV                                          30 MIDD
LE EAST - CRIMEA - BALKANS   366 TURKEY

222  2006 F1 66   8 19 2439357 38.8 N  41.7 E 30 366 26.  26
   90.1     24.4 12 35  9.0 12 22  5.6  2006 BM     66/08/19
  2439357    38.8 N    041.7 E    6.5
                  26     90.1      24.4    12-35-09.0    12-22-05
.6    QTETDHLUUV                                          30 MIDD
LE EAST - CRIMEA - BALKANS   366 TURKEY

222  2006 F2 66   8 19 2439357 38.8 N  41.7 E 30 366 26.  26
   90.1     24.4 12 35  9.0 12 22  5.6  2006 BM     66/08/19
  2439357    38.8 N    041.7 E    6.5
                  26     90.1      24.4    12-35-09.0    12-22-05
.6    QTETDHLUUV                                          30 MIDD
LE EAST - CRIMEA - BALKANS   366 TURKEY

222  2006 F3 66   8 19 2439357 38.8 N  41.7 E 30 366 26.  26
   90.1     24.4 12 35  9.0 12 22  5.6  2006 BM     66/08/19
  2439357    38.8 N    041.7 E    6.5
                  26     90.1      24.4    12-35-09.0    12-22-05
.6    QTETDHLUUV                                          30 MIDD
LE EAST - CRIMEA - BALKANS   366 TURKEY

222  2006 F4 66   8 19 2439357 38.8 N  41.7 E 30 366 26.  26
   90.1     24.4 12 35  9.0 12 22  5.6  2006 BM     66/08/19
  2439357    38.8 N    041.7 E    6.5
                  26     90.1      24.4    12-35-09.0    12-22-05
.6    QTETDHLUUV                                          30 MIDD
LE EAST - CRIMEA - BALKANS   366 TURKEY

223  2017 BM 67   3 25 2439575 44.8 N 149.0 E 19 221 33.  33
   67.4    311.9 22 58 40.0 22 47 40.9  2017 BM     67/03/25
  2439575    44.8 N    149.0 E    5.6
                  33     67.4      311.9    22-58-40.0    22-47-40
.9    LBVBFJQFDD                                          19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

223  2017 F1 67   3 25 2439575 44.8 N 149.0 E 19 221 33.  33
   67.4    311.9 22 58 40.0 22 47 40.9  2017 BM     67/03/25
  2439575    44.8 N    149.0 E    5.6
                  33     67.4      311.9    22-58-40.0    22-47-40
.9    LBVBFJQFDD                                          19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

223  2017 F2 67   3 25 2439575 44.8 N 149.0 E 19 221 33.  33
   67.4    311.9 22 58 40.0 22 47 40.9  2017 BM     67/03/25
  2439575    44.8 N    149.0 E    5.6
                  33     67.4      311.9    22-58-40.0    22-47-40
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.9   LBVBFJQFDD                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

223  2017 F3 67  3 25 2439575 44.8 N 149.0 E 19 221 33.  33
   67.4   311.9 22 58 40.0 22 47 40.9  2017 BM     67/03/25
  2439575   44.8 N   149.0 E   5.6
                 33     67.4     311.9   22-58-40.0   22-47-40
.9   LBVBFJQFDD                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

223  2017 F4 67  3 25 2439575 44.8 N 149.0 E 19 221 33.  33
   67.4   311.9 22 58 40.0 22 47 40.9  2017 BM     67/03/25
  2439575   44.8 N   149.0 E   5.6
                 33     67.4     311.9   22-58-40.0   22-47-40
.9   LBVBFJQFDD                                          19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

224  2003 BM 66  5 20 2439266 55.3 N 162.3 E 19 218 33.  33
   54.2   315.3 11 53 42.1 11 44 12.9  2003 BM     66/05/20
  2439266   55.3 N   16223 E   5.4
                 33     54.2     315.3   11-53-42.1   11-44-12
.9   WZVQPCSVUL                                          19 JAPA
N - KURILES - KAMCHATKA        218 NEAR EAST COAST OF KAMCHATK
A
224  2003 F1 66  5 20 2439266 55.3 N 162.3 E 19 218 33.  33
   54.2   315.3 11 53 42.1 11 44 12.9  2003 BM     66/05/20
  2439266   55.3 N   162.3 E   5.4
                 33     54.2     315.3   11-53-42.1   11-44-12
.9   WZVQPCSVUL                                          19 JAPA
N - KURILES - KAMCHATKA        218 NEAR EAST COAST OF KAMCHATK
A
224  2003 F2 66  5 20 2439266 55.3 N 162.3 E 19 218 33.  33
   54.2   315.3 11 53 42.1 11 44 12.9  2003 BM     66/05/20
  2439266   55.3 N   162.3 E   5.4
                 33     54.2     315.3   11-53-42.1   11-44-12
.9   WZVQPCSVUL                                          19 JAPA
N - KURILES - KAMCHATKA        218 NEAR EAST COAST OF KAMCHATK
A
224  2003 F3 66  5 20 2439266 55.3 N 162.3 E 19 218 33.  33
   54.2   315.3 11 53 42.1 11 44 12.9  2003 BM     66/05/20
  2439266   55.3 N   162.3 E   5.4
                 33     54.2     315.3   11-53-42.1   11-44-12
.9   WZVQPCSVUL                                          19 JAPA
N - KURILES - KAMCHATKA        218 NEAR EAST COAST OF KAMCHATK
A
224  2003 F4 66  5 20 2439266 55.3 N 162.3 E 19 218 33.  33
   54.2   315.3 11 53 42.1 11 44 12.9  2003 BM     66/05/20
  2439266   55.3 N   162.3 E   5.4
                 33     54.2     315.3   11-53-42.1   11-44-12
.9   WZVQPCSVUL                                          19 JAPA
N - KURILES - KAMCHATKA        218 NEAR EAST COAST OF KAMCHATK
A
225  2012 BM 67  1  5 2439496 32.8 N  73.8 E 47 710 57.  57
  100.8   360.0 10 21 20.0 10  7 28.1  2012 BM     67/01/05
  2439496   32.8 N   073.8 E   6.0
                 57    100.8     360.0   10-21-20.0   10-07-28
.1   IRLGWRDWYK                                          47 BALU
CHISTAN                        710 WEST PAKISTAN

225  2012 F1 67  1  5 2439496 32.8 N  73.8 E 47 710 57.  57
```

```
   100.8    360.0 10 21 20.0 10  7 28.1  2012 BM     67/01/05
   2439496    32.8 N    073.8 E    6.0
                     57     100.8      360.0    10-21-20.0    10-07-28
.1    IRLQWBDWYK                                               47 BALU
CHISTAN                                710 WEST PAKISTAN

225  2012 F2 67  1  5 2439496 32.8 N  73.8 E 47 710 57.  57
   100.8    360.0 10 21 20.0 10  7 28.1  2012 BM     67/01/05
   2439496    32.8 N    073.8 E    6.0
                     57     100.8      360.0    10-21-20.0    10-07-28
.1    IRLQWBDWYK                                               47 BALU
CHISTAN                                710 WEST PAKISTAN

225  2012 F3 67  1  5 2439496 32.8 N  73.8 E 47 710 57.  57
   100.8    360.0 10 21 20.0 10  7 28.1  2012 BM     67/01/05
   2439496    32.8 N    073.8 E    6.0
                     57     100.8      360.0    10-21-20.0    10-07-28
.1    IRLQWBDWYK                                               47 BALU
CHISTAN                                710 WEST PAKISTAN

225  2012 F4 67  1  5 2439496 32.8 N  73.8 E 47 710 57.  57
   100.8    360.0 10 21 20.0 10  7 28.1  2012 BM     67/01/05
   2439496    32.8 N    073.8 E    6.0
                     57     100.8      360.0    10-21-20.0    10-07-28
.1    IRLQWBDWYK                                               47 BALU
CHISTAN                                710 WEST PAKISTAN


226  2018 BM 67  4  1 2439582 46.1 N 151.9 E 19 221 40.  40
   65.0    311.4  6  7 46.0  5 57  2.2   018 BM     67/04/01
  2439582    46.1 N    151.9 E    5.7
                    40      65.0      311.4    06-07-46.0    05-57-02.
2    VPLQKPGVOR                                              19 JAPAN
 - KURILES - KAMCHATKA        221 KURILE ISLANDS

226  2018 F1 67  4  1 2439582 46.1 N 151.9 E 19 221 40.  40
    65.0    311.4  6  7 46.0  5 57  2.2  2018 BM     67/04/01
   2439582    46.1 N    151.9 E    5.7
                     40      65.0      311.4    06-07-46.0    05-57-02
.2    VPLGKPGVOR                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

226  2018 F2 67  4  1 2439582 46.1 N 151.9 E 19 221 40.  40
    65.0    311.4  6  7 46.0  5 57  2.2  2018 BM     67/04/01
   2439582    46.1 N    151.9 E    5.7
                     40      65.0      311.4    06-07-46.0    05-57-02
.2    VPLQKPGVOR                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

226  2018 F3 67  4  1 2439582 46.1 N 151.9 E 19 221 40.  40
    65.0    311.4  6  7 46.0  5 57  2.2  2018 BM     67/04/01
   2439582    46.1 N    151.9 E    5.7
                     40      65.0      311.4    06-07-46.0    05-57-02
.2    VPLQKPGVOR                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

226  2018 F4 67  4  1 2439582 46.1 N 151.9 E 19 221 40.  40
    65.0    311.4  6  7 46.0  5 57  2.2  2018 BM     67/04/01
   2439582    46.1 N    151.9 E    5.7
                     40      65.0      311.4    06-07-46.0    05-57-02
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.2   VPLGKPGVOR                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

227  2016 BM 67  1 20 2439511 45.9 N 104.8 E 28 334 33.  33
   83.8   338.8  2  9 42.0  1 57  9.4  2016 BM     67/01/20
  2439511   45.9 N   104.8 E   6.3
                   33    83.8    338.8   02-09-42.0   01-57-09
.4   ZFYPHQWLJM                                              28 ALMA
-ATA TO LAKE BAIKAL             334 MONGOLIA

227  2016 F1 67  1 20 2439511 45.9 N 104.8 E 28 334 33.  33
   83.8   338.8  2  9 42.0  1 57  9.4  2016 BM     67/01/20
  2439511   45.9 N   104.8 E   6.3
                   33    83.8    338.8   02-09-42.0   01-57-09
.4   ZFYPHQWLJM                                              28 ALMA
-ATA TO LAKE BAIKAL             334 MONGOLIA

227  2016 F2 67  1 20 2439511 45.9 N 104.8 E 28 334 33.  33
   83.8   338.8  2  9 42.0  1 57  9.4  2016 BM     67/01/20
  2439511   45.9 N   104.8 E   6.3
                   33    83.8    338.8   02-09-42.0   01-57-09
.4   ZFYPHQWLJM                                              28 ALMA
-ATA TO LAKE BAIKAL             334 MONGOLIA

227  2016 F3 67  1 20 2439511 45.9 N 104.8 E 28 334 33.  33
   83.8   338.8  2  9 42.0  1 57  9.4  2016 BM     67/01/20
  2439511   45.9 N   104.8 E   6.3
                   33    83.8    338.8   02-09-42.0   01-57-09
.4   ZFYPHQWLJM                                              28 ALMA
-ATA TO LAKE BAIKAL             334 MONGOLIA

227  2016 F4 67  1 20 2439511 45.9 N 104.8 E 28 334 33.  33
   83.8   338.8  2  9 42.0  1 57  9.4  2016 BM     67/01/20
  2439511   45.9 N   104.8 E   6.3
                   33    83.8    338.8   02-09-42.0   01-57-09
.4   ZFYPHQWLJM                                              28 ALMA
-ATA TO LAKE BAIKAL             334 MONGOLIA

228  2008 BM 66 11 21 2439451 45.8 N 148.3 E 19 221 33.  33
   67.0   313.0 12 30  2.2 12 19  5.1  2008 BM     66/11/21
  2439451   45.8 N   148.3 E   6.2
                   33    67.0    313.0   12-30-02.2   12-19-05
.1   LOIBRKQKKC                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

228  2008 F1 66 11 21 2439451 45.8 N 148.3 E 19 221 33.  33
   67.0   313.0 12 30  2.2 12 19  5.1  2008 BM     66/11/21
  2439451   45.8 N   148.3 E   6.2
                   33    67.0    313.0   12-30-02.2   12-19-05
.1   LOIBRKQKKC                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

228  2008 F2 66 11 21 2439451 45.8 N 148.3 E 19 221 33.  33
   67.0   313.0 12 30  2.2 12 19  5.1  2008 BM     66/11/21
  2439451   45.8 N   148.3 E   6.2
                   33    67.0    313.0   12-30-02.2   12-19-05
.1   LOIBRKQKKC                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

228  2008 F3 66 11 21 2439451 45.8 N 148.3 E 19 221 33.  33
```

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    67.0    313.0 12 30   2.2 12 19   5.1   2008 BM      66/11/21
  2439451    45.8 N    148.3 E    6.2
                    33      67.0      313.0    12-30-02.2    12-19-05
.1    LOIBRKQKKC                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

228  2008 F4 66 11 21 2439451 45.8 N 148.3 E 19 221 33.  33
    67.0    313.0 12 30   2.2 12 19   5.1   2008 BM      66/11/21
  2439451    45.8 N    148.3 E    6.2
                    33      67.0      313.0    12-30-02.2    12-19-05
.1    LOIBRKQKKC                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

229  2020 BM 67  4  1 2439582 45.2 N 149.5 E 19 221 33.  33
    66.8    311.9 14 11 16.0 14   0 20.2   2020 BM      67/04/01
  2439582    45.2 N    149.5 E    5.6
                    33      66.8      311.9    14-11-16.0    14-00-20
.2    KLFQBTBYFZ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

229  2020 F1 67  4  1 2439582 45.2 N 149.5 E 19 221 33.  33
    66.8    311.9 14 11 16.0 14   0 20.2   2020 BM      67/04/01
  2439582    45.2 N    149.5 E    5.6
                    33      66.8      311.9    14-11-16.0    14-00-20
.2    KLFQBTBYFZ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

229  2020 F2 67  4  1 2439582 45.2 N 149.5 E 19 221 33.  33
    66.8    311.9 14 11 16.0 14   0 20.2   2020 BM      67/04/01
  2439582    45.2 N    149.5 E    5.6
                    33      66.8      311.9    14-11-16.0    14-00-20
.2    KLFQBTBYFZ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

229  2020 F3 67  4  1 2439582 45.2 N 149.5 E 19 221 33.  33
    66.8    311.9 14 11 16.0 14   0 20.2   2020 BM      67/04/01
  2439582    45.2 N    149.5 E    5.6
                    33      66.8      311.9    14-11-16.0    14-00-20
.2    KLFQBTBYFZ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

229  2020 F4 67  4  1 2439582 45.2 N 149.5 E 19 221 33.  33
    66.8    311.9 14 11 16.0 14   0 20.2   2020 BM      67/04/01
  2439582    45.2 N    149.5 E    5.6
                    33      66.8      311.9    14-11-16.0    14-00-20
.2    KLFQBTBYFZ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

230  2023 BM 67  4 27 2439608 41.9 N  84.8 E 27 321 33.  33
    91.2    351.8 23 28 28.0 23 15 20.2   2023 BM      67/04/27
  2439608    41.9 N    084.8 E    5.3
                    33      91.2      351.8    23-28-28.0    23-15-20
.2    LYJPYRQYEP                                             27 SOUT
HERN SINKIANG TO KANSU         321 SOUTHERN SINKIANG PROV., CH
INA
230  2023 F1 67  4 27 2439608 41.9 N  84.8 E 27 321 33.  33
    91.2    351.8 23 28 28.0 23 15 20.2   2023 BM      67/04/27
  2439608    41.9 N    084.8 E    5.3
                    33      91.2      351.8    23-28-28.0    23-15-20
.2    LYJPYRQYEP                                             27 SOUT
```

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HERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CH
INA
230  2023 F2 67  4 27 2439608 41.9 N  84.8 E 27 321 33.  33
   91.2   351.8 23 28 28.0 23 15 20.2  2023 BM    67/04/27
  2439608   41.9 N   08448 E   5.3
                 33    91.2    351.8   23-28-28.0   23-15-20
.2   LYJPYRQYEP                                      27 SOUT
HERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CH
INA
230  2023 F3 67  4 27 2439608 41.9 N  84.8 E 27 321 33.  33
   91.2   351.8 23 28 28.0 23 15 20.2  2023 BM    67/04/27
  2439608   41.9 N   084.8 E   5.3
                 33    91.2    351.8   23-28-28.0   23-15-20
.2   LYJPYRQYEP                                      27 SOUT
HERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CH
INA
230  2023 F4 67  4 27 2439608 41.9 N  84.8 E 27 321 33.  33
   91.2   351.8 23 28 28.0 23 15 20.2  2023 BM    67/04/27
  2439608   41.9 N   084.8 E   5.3
                 33    91.2    351.8   23-28-28.0   23-15-20
.2   LYJPYRQYEP                                      27 SOUT
HERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CH
INA
231  2025 BM 67  5 27 2439638 39.9 N  77.3 E 27 321 33.  33
   93.6   357.3  1 56  3.0  1 42 43.4  2025 BM    67/05/27
  2439638   39.9 N   077.3 E   5.1
                 33    93.6    357.3   01-56-03.0   01-42-43
.4   CLQODPWECK                                      27 SOUT
HERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CH
INA
231  2025 F1 67  5 27 2439638 39.9 N  77.3 E 27 321 33.  33
   93.6   357.3  1 56  3.0  1 42 43.4  2025 BM    67/05/27
  2439638   39.9 N   077.3 E   5.1
                 33    93.6    357.3   01-56-03.0   01-42-43
.4   CLQODPWECK                                      27 SOUT
HERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CH
INA
231  2025 F2 67  5 27 2439638 39.9 N  77.3 E 27 321 33.  33
   93.6   357.3  1 56  3.0  1 42 43.4  2025 BM    67/05/27
  2439638   39.9 N   077.3 E   5.1
                 33    93.6    357.3   01-56-03.0   01-42-43
.4   CLQODPWECK                                      27 SOUT
HERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CH
INA
231  2025 F3 67  5 27 2439638 39.9 N  77.3 E 27 321 33.  33
   93.6   357.3  1 56  3.0  1 42 43.4  2025 BM    67/05/27
  2439638   39.9 N   077.3 E   5.1
                 33    93.6    357.3   01-56-03.0   01-42-43
.4   CLQODPWECK                                      27 SOUT
HERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CH
INA
231  2025 F4 67  5 27 2439638 39.9 N  77.3 E 27 321 33.  33
   93.6   357.3  1 56  3.0  1 42 43.4  2025 BM    67/05/27
  2439638   39.9 N   077.3 E   5.1
                 33    93.6    357.3   01-56-03.0   01-42-43
.4   CLQODPWECK                                      27 SOUT
HERN SINKIANG TO KANSU        321 SOUTHERN SINKIANG PROV., CH
INA
232  2026 BM 67  5 27 2439638 37.4 N  79.9 E 27 321 35.  35
   96.0   355.1 19 19 21.0 19  5 50.9   026 BM    67/05/27
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  2439638   37.4 N   079.9 E   5.4
                   35     96.0     355.1   19-19-21.0   19-05-50
.9   RCLKDQPEHI                                          27 SOUT
HERN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CH
INA
232  2026 F1 67  5 27 2439638 37.4 N  79.9 E 27 321 35.  35
   96.0   355.1 19 19 21.0 19  5 50.9  2026 BM    67/05/27
  2439638   37.4 N   079.9 E   5.4
                   35     96.0     355.1   19-19-21.0   19-05-50
.9   RCLKDQPEHI                                          27 SOUT
HERN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CH
INA
232  2026 F2 67  5 27 2439638 37.4 N  79.9 E 27 321 35.  35
   96.0   355.1 19 19 21.0 19  5 50.9  2026 BM    67/05/27
  2439638   37.4 N   079.9 E   5.4
                   35     96.0     355.1   19-19-21.0   19-05-50
.9   RCLKDQPEHI                                          27 SOUT
HERN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CH
INA
232  2026 F3 67  5 27 2439638 37.4 N  79.9 E 27 321 35.  35
   96.0   355.1 19 19 21.0 19  5 50.9  2026 BM    67/05/27
  2439638   37.4 N   079.9 E   5.4
                   35     96.0     355.1   19-19-21.0   19-05-50
.9   RCLKDQPEHI                                          27 SOUT
HERN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CH
INA
232  2026 F4 67  5 27 2439638 37.4 N  79.9 E 27 321 35.  35
   96.0   355.1 19 19 21.0 19  5 50.9  2026 BM    67/05/27
  2439638   37.4 N   079.9 E   5.4
                   35     96.0     355.1   19-19-21.0   19-05-50
.9   RCLKDQPEHI                                          27 SOUT
HERN SINKIANG TO KANSU       321 SOUTHERN SINKIANG PROV., CH
INA
233  2027 BM 67  6  7 2439649 46.8 N 153.6 E 19 221 35.  35
   63.6   311.1 18 26 54.0 18 16 18.6  2027 BM    67/06/07
  2439649   46.8 N   153.6 E   5.6
                   35     63.6     311.1   18-26-54.0   18-16-18
.6   JEQLTUFPKP                                          19 JAPA
N - KURILES - KAMCHATKA     221 KURILE ISLANDS

233  2027 F1 67  6  7 2439649 46.8 N 153.6 E 19 221 35.  35
   63.6   311.1 18 26 54.0 18 16 18.6  2027 BM    67/06/07
  2439649   46.8 N   153.6 E   5.6
                   35     63.6     311.1   18-26-54.0   18-16-18
.6   JEQLTUFPKP                                          19 JAPA
N - KURILES - KAMCHATKA     221 KURILE ISLANDS

233  2027 F2 67  6  7 2439649 46.8 N 153.6 E 19 221 35.  35
   63.6   311.1 18 26 54.0 18 16 18.6  2027 BM    67/06/07
  2439649   46.8 N   153.6 E   5.6
                   35     63.6     311.1   18-26-54.0   18-16-18
.6   JEQLTUFPKP                                          19 JAPA
N - KURILES - KAMCHATKA     221 KURILE ISLANDS

233  2027 F3 67  6  7 2439649 46.8 N 153.6 E 19 221 35.  35
   63.6   311.1 18 26 54.0 18 16 18.6  2027 BM    67/06/07
  2439649   46.8 N   153.6 E   5.6
                   35     63.6     311.1   18-26-54.0   18-16-18
.6   JEQLTUFPKP                                          19 JAPA
N - KURILES - KAMCHATKA     221 KURILE ISLANDS
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233  2027 F4 67  6  7 2439649 46.8 N 153.6 E 19 221 35.  35
    63.6    311.1 18 26 54.0 18 16 18.6  2027 BM     67/06/07
  2439649    46.8 N    153.6 E    5.6
                    35      63.6      311.1    18-26-54.0    18-16-18
.6   JEQLTUFPKP                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

234  2028 BM 67 10  5 2439769 44.4 N 149.8 E 19 221 33.  33
    67.2    311.1 16  5 49.1 15 54 50.7  2028 BM     67/10/05
  2439769    44.4 N    149.8 E    5.6
                    33      67.2      311.1    16-05-49.1    15-54-50
.7   MHMLOHIKHQ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

234  2028 F1 67 10  5 2439769 44.4 N 149.8 E 19 221 33.  33
    67.2    311.1 16  5 49.1 15 54 50.7  2028 BM     67/10/05
  2439769    44.4 N    149.8 E    5.6
                    33      67.2      311.1    16-05-49.1    15-54-50
.7   MHMLOHIKHQ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

234  2028 F2 67 10  5 2439769 44.4 N 149.8 E 19 221 33.  33
    67.2    311.1 16  5 49.1 15 54 50.7  2028 BM     67/10/05
  2439769    44.4 N    149.8 E    5.6
                    33      67.2      311.1    16-05-49.1    15-54-50
.7   MHMLOHIKHQ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

234  2028 F3 67 10  5 2439769 44.4 N 149.8 E 19 221 33.  33
    67.2    311.1 16  5 49.1 15 54 50.7  2028 BM     67/10/05
  2439769    44.4 N    149.8 E    5.6
                    33      67.2      311.1    16-05-49.1    15-54-50
.7   MHMLOHIKHQ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

234  2028 F4 67 10  5 2439769 44.4 N 149.8 E 19 221 33.  33
    67.2    311.1 16  5 49.1 15 54 50.7  2028 BM     67/10/05
  2439769    44.4 N    149.8 E    5.6
                    33      67.2      311.1    16-05-49.1    15-54-50
.7   MHMLOHIKHQ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

235  2032 BM 67 12 14 2439839 54.3 N 160.0 E 28 326 33.  33
    55.8    315.1 18 34 53.0 18 25 11.4  2032 BM     67/12/14
  2439839    54.3 N    160.0 E    5.4
                    33      55.8      315.1    18-34-53.0    18-25-11
.4   HEQJFTWWSL                                              28 ALMA
-ATA TO LAKE BAIKAL            326 CENTRAL RUSSIA

235  2032 F1 67 12 14 2439839 54.3 N 160.0 E 28 326 33.  33
    55.8    315.1 18 34 53.0 18 25 11.4  2032 BM     67/12/14
  2439839    54.3 N    160.0 E    5.4
                    33      55.8      315.1    18-34-53.0    18-25-11
.4   HEQJFTWWSL                                              28 ALMA
-ATA TO LAKE BAIKAL            326 CENTRAL RUSSIA

235  2032 F2 67 12 14 2439839 54.3 N 160.0 E 28 326 33.  33
    55.8    315.1 18 34 53.0 18 25 11.4  2032 BM     67/12/14
  2439839    54.3 N    160.0 E    5.4
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                33     55.8     315.1    18-34-53.0    18-25-11
.4   HFQJFTWWSL                                         28 ALMA
-ATA TO LAKE BAIKAL           326 CENTRAL RUSSIA

235  2032 F3 67 12 14 2439839 54.3 N 160.0 E 28 326 33.  33
   55.8    315.1 18 34 53.0 18 25 11.4  2032 BM     67/12/14
  2439839   54.3 N    160.0 E    5.4
                33     55.8     315.1    18-34-53.0    18-25-11
.4   HEQJFTWWSL                                         28 ALMA
-ATA TO LAKE BAIKAL           326 CENTRAL RUSSIA

235  2032 F4 67 12 14 2439839 54.3 N 160.0 E 28 326 33.  33
   55.8    315.1 18 34 53.0 18 25 11.4  2032 BM     67/12/14
  2439839   54.3 N    160.0 E    5.4
                33     55.8     315.1    18-34-53.0    18-25-11
.4   HEQJFTWWSL                                         28 ALMA
-ATA TO LAKE BAIKAL           326 CENTRAL RUSSIA

236  2033 BM 67 12 16 2439841 51.0 N 157.4 E 19 218 45.  45
   59.0    313.0 21  3 57.0 20 53 52.7  2033 BM     67/12/16
  2439841   51.0 N    157.4 E    5.9
                45     59.0     313.0    21-03-57.0    20-53-52
.7   ZRTEVDGLWU                                         19 JAPA
N - KURILES - KAMCHATKA       218 NEAR EAST COAST OF KAMCHATK
A
236  2033 F1 67 12 16 2439841 51.0 N 157.4 E 19 218 45.  45
   59.0    313.0 21  3 57.0 20 53 52.7  2033 BM     67/12/16
  2439841   51.0 N    157.4 E    5.9
                45     59.0     313.0    21-03-57.0    20-53-52
.7   ZRTEVDGLWU                                         19 JAPA
N - KURILES - KAMCHATKA       218 NEAR EAST COAST OF KAMCHATK
A
236  2033 F2 67 12 16 2439841 51.0 N 157.4 E 19 218 45.  45
   59.0    313.0 21  3 57.0 20 53 52.7  2033 BM     67/12/16
  2439841   51.0 N    157.4 E    5.9
                45     59.0     313.0    21-03-57.0    20-53-52
.7   ZRTEVDGLWU                                         19 JAPA
N - KURILES - KAMCHATKA       218 NEAR EAST COAST OF KAMCHATK
A
236  2033 F3 67 12 16 2439841 51.0 N 157.4 E 19 218 45.  45
   59.0    313.0 21  3 57.0 20 53 52.7  2033 BM     67/12/16
  2439841   51.0 N    157.4 E    5.9
                45     59.0     313.0    21-03-57.0    20-53-52
.7   ZRTEVDGLWU                                         19 JAPA
N - KURILES - KAMCHATKA       218 NEAR EAST COAST OF KAMCHATK
A
236  2033 F4 67 12 16 2439841 51.0 N 157.4 E 19 218 45.  45
   59.0    313.0 21  3 57.0 20 53 52.7  2033 BM     67/12/16
  2439841   51.0 N    157.4 E    5.9
                45     59.0     313.0    21-03-57.0    20-53-52
.7   ZRTEVDGLWU                                         19 JAPA
N - KURILES - KAMCHATKA       218 NEAR EAST COAST OF KAMCHATK
A
237  1009 BM 68  1  3 2439859 54.9 N 161.8 E 28 326 33.  33
   54.6    315.0  7 58 33.0  7 49    .6  1009 BM     68/01/03
  2439859   54.9 N    161.8 E    5.0
                33     54.6     315.0    07-58-33.0    07-49-00
.6   MMLOZSUPPS                                         28 ALMA
-ATA TO LAKE BAIKAL           326 CENTRAL RUSSIA
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237  1009 F1 68  1  3 2439859 54.9 N 161.8 E 28 326 33.  33
   54.6   315.0  7 58 33.0  7 49   .6  1009 BM    68/01/03
  2439859   54.9 N   161.8 E   5.0
                  33    54.6    315.0   07-58-33.0   07-49-00
.6   MMLQZSOPPS                                       28 ALMA
-ATA TO LAKE BAIKAL           326 CENTRAL RUSSIA

237  1009 F2 68  1  3 2439859 54.9 N 161.8 E 28 326 33.  33
   54.6   315.0  7 58 33.0  7 49   .6  1009 BM    68/01/03
  2439859   54.9 N   161.8 E   5.0
                  33    54.6    315.0   07-58-33.0   07-49-00
.6   MMLQZSOPPS                                       28 ALMA
-ATA TO LAKE BAIKAL           326 CENTRAL RUSSIA

237  1009 F3 68  1  3 2439859 54.9 N 161.8 E 28 326 33.  33
   54.6   315.0  7 58 33.0  7 49   .6  1009 BM    68/01/03
  2439859   54.9 N   161.8 E   5.0
                  33    54.6    315.0   07-58-33.0   07-49-00
.6   MMLQZSOPPS                                       28 ALMA
-ATA TO LAKE BAIKAL           326 CENTRAL RUSSIA

237  1009 F4 68  1  3 2439859 54.9 N 161.8 E 28 326 33.  33
   54.6   315.0  7 58 33.0  7 49   .6  1009 BM    68/01/03
  2439859   54.9 N   161.8 E   5.0
                  33    54.6    315.0   07-58-33.0   07-49-00
.6   MMLQZSOPPS                                       28 ALMA
-ATA TO LAKE BAIKAL           326 CENTRAL RUSSIA

238  1023 BM 68  1  6 2439862 45.7 N  25.5 E 52 358163. 163
   78.6     32.2 10 35 37.8 10 23 32.7  1023 BM    68/01/06
  2439862   45.7 N   025.5 E   4.8
                 163    78.6     32.2   10-35-37.8   10-23-32
.7   MQYCLJDJCT                                       52 G RE
G = 358 AND D GT 70           358 RUMANIA

238  1023 F1 68  1  6 2439862 45.7 N  25.5 E 52 358163. 163
   78.6     32.2 10 35 37.8 10 23 32.7  1023 BM    68/01/06
  2439862   45.7 N   025.5 E   4.8
                 163    78.6     32.2   10-35-37.8   10-23-32
.7   MQYCLJDJCT                                       52 G RE
G = 358 AND D GT 70           358 RUMANIA

238  1023 F2 68  1  6 2439862 45.7 N  25.5 E 52 358163. 163
   78.6     32.2 10 35 37.8 10 23 32.7  1023 BM    68/01/06
  2439862   45.7 N   025.5 E   4.8
                 163    78.6     32.2   10-35-37.8   10-23-32
.7   MQYCLJDJCT                                       52 G RE
G = 358 AND D GT 70           358 RUMANIA

238  1023 F3 68  1  6 2439862 45.7 N  25.5 E 52 358163. 163
   78.6     32.2 10 35 37.8 10 23 32.7  1023 BM    68/01/06
  2439862   45.7 N   025.5 E   4.8
                 163    78.6     32.2   10-35-37.8   10-23-32
.7   MQYCLJDJCT                                       52 G RE
G = 358 AND D GT 70           358 RUMANIA

238  1023 F4 68  1  6 2439862 45.7 N  25.5 E 52 358163. 163
   78.6     32.2 10 35 37.8 10 23 32.7  1023 BM    68/01/06
  2439862   45.7 N   025.5 E   4.8
                 163    78.6     32.2   10-35-37.8   10-23-32
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.7   MGYCLJDJCT                                              52 G RE
G = 358 AND D GT 70             358 RUMANIA

239  1029 BM 68  1  9 2439865 50.0 N 155.5 E 19 221 48.  48
    60.6   313.0  5 58  4.7  5 47 49.4  1029 BM    68/01/09
  2439865   50.0 N   155.5 E   4.1
                   48    60.6    313.0   05-58-04.7   05-47-49
.4   IPYKKTKOLP                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

239  1029 F1 68  1  9 2439865 50.0 N 155.5 E 19 221 48.  48
    60.6   313.0  5 58  4.7  5 47 49.4  1029 BM    68/01/09
  2439865   50.0 N   155.5 E   4.1
                   48    60.6    313.0   05-58-04.7   05-47-49
.4   IPYKKTKOLP                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

239  1029 F2 68  1  9 2439865 50.0 N 155.5 E 19 221 48.  48
    60.6   313.0  5 58  4.7  5 47 49.4  1029 BM    68/01/09
  2439865   50.0 N   155.5 E   4.1
                   48    60.6    313.0   05-58-04.7   05-47-49
.4   IPYKKTKOLP                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

239  1029 F3 68  1  9 2439865 50.0 N 155.5 E 19 221 48.  48
    60.6   313.0  5 58  4.7  5 47 49.4  1029 BM    68/01/09
  2439865   50.0 N   155.5 E   4.1
                   48    60.6    313.0   05-58-04.7   05-47-49
.4   IPYKKTKOLP                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

239  1029 F4 68  1  9 2439865 50.0 N 155.5 E 19 221 48.  48
    60.6   313.0  5 58  4.7  5 47 49.4  1029 BM    68/01/09
  2439865   50.0 N   155.5 E   4.1
                   48    60.6    313.0   05-58-04.7   05-47-49
.4   IPYKKTKOLP                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

240  1036 BM 68  1 12 2439868 49.3 N 156.3 E 19 221 54.  54
    60.6   312.0 15 21 16.6 15 11  1.1  1036 BM    68/01/12
  2439868   49.3 N   156.3 E   4.6
                   54    60.6    312.0   15-21-16.6   15-11-01
.1   MLITYOCEMM                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

240  1036 F1 68  1 12 2439868 49.3 N 156.3 E 19 221 54.  54
    60.6   312.0 15 21 16.6 15 11  1.1  1036 BM    68/01/12
  2439868   49.3 N   156.3 E   4.6
                   54    60.6    312.0   15-21-16.6   15-11-01
.1   MLITYOCEMM                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

240  1036 F2 68  1 12 2439868 49.3 N 156.3 E 19 221 54. 554
    60.6   312.0 15 21 16.6 15 11  1.1  1036 BM    68/01/12
  2439868   49.3 N   156.3 E   4.6
                   54    60.6    312.0   15-21-16.6   15-11-01
.1   MLITYOCEMM                                              19 JAPA
N - KURILES - KAMCHATKA         221 KURILE ISLANDS

240  1036 F3 68  1 12 2439868 49.3 N 156.3 E 19 221 54.  54
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    60.6   312.0 15 21 16.6 15 11  1.1  1036 BM    68/01/12
  2439868   49.3 N   156.3 E   4.6
                    54    60.6    312.0    15-21-16.6   15-11-01
.1   MLITYQCEMM                                            19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

240  1036 F4 68  1 12 2439868 49.3 N 156.3 E 19 221 54.  54
    60.6   312.0 15 21 16.6 15 11  1.1  1036 BM    68/01/12
  2439868   49.3 N   156.3 E   4.6
                    54    60.6    312.0    15-21-16.6   15-11-01
.1   MLITYQCEMM                                            19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

241  1059 BM 68  1 17 2439873 41.2 N 102.2 E 27 323 33.  33
    88.8   339.0  3 13 11.0  3  0 13.9  1059 BM    68/01/17
  2439873   41.2 N   102.2 E   4.6
                    33    88.8    339.0    03-13-11.0   03-00-13
.9   UKOWGLQPTE                                            27 SOUT
HERN SINKIANG TO KANSU        323 NORTHERN CHINA

241  1059 F1 68  1 17 2439873 41.2 N 102.2 E 27 323 33.  33
    88.8   339.0  3 13 11.0  3  0 13.9  1059 BM    68/01/17
  2439873   41.2 N   102.2 E   4.6
                    33    88.8    339.0    03-13-11.0   03-00-13
.9   UKOWGLQPTE                                            27 SOUT
HERN SINKIANG TO KANSU        323 NORTHERN CHINA

241  1059 F2 68  1 17 2439873 41.2 N 102.2 E 27 323 33.  33
    88.8   339.0    13 11.0  3  0 13.9  1059 BM    68/01/17
  2439873   41.2 N   102.2 E   4.6
                    33    88.8    339.0    03-13-11.0   03-00-13
.9   UKOWGLQPTE                                            27 SOUT
HERN SINKIANG TO KANSU        323 NORTHERN CHINA

241  1059 F3 68  1 17 2439873 41.2 N 102.2 E 27 323 33.  33
    88.8   339.0  3 13 11.0  3  0 13.9  1059 BM    68/01/17
  2439873   41.2 N   102.2 E   4.6
                    33    88.8    339.0    03-13-11.0   03-00-13
.9   UKOWGLQPTE                                            27 SOUT
HERN SINKIANG TO KANSU        323 NORTHERN CHINA

241  1059 F4 68  1 17 2439873 41.2 N 102.2 E 27 323 33.  33
    88.8   339.0  3 13 11.0  3  0 13.9  1059 BM    68/01/17
  2439873   41.2 N   102.2 E   4.6
                    33    88.8    339.0    03-13-11.0   03-00-13
.9   UKOWGLQPTE                                            27 SOUT
HERN SINKIANG TO KANSU        323 NORTHERN CHINA

242  1070 BM 68  1 19 2439875 79.6 N 132.0 E 40 654 24.  24
    49.6   348.3  7  8 36.0  6 59 41.3  1070 BM    68/01/19
  2439875   79.6 N   132.0 E   4.5
                    24    49.6    348.3    07-08-36.0   06-59-41
.3   ZJVKSDJQEL                                            40 ARCT
IC ZONE                       654 EAST OF SEVERNAYA ZEMLYA

242  1070 F1 68  1 19 2439875 79.6 N 132.0 E 40 654 24.  24
    49.6   348.3  7  8 36.0  6 59 41.3  1070 BM    68/01/19
  2439875   79.6 N   132.0 E   4.5
                    24    49.6    348.3    07-08-36.0   06-59-41
.3   ZJVKSDJQEL                                            40 ARCT
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IC ZONE                               654 EAST OF SEVERNAYA ZEMLYA

242  1070 F2 68  1 19 2439875 79.6 N 132.0 E 40 654 24.  24
   49.6    348.3  7   8 36.0  6 59 41.3  1070 BM     68/01/19
  2439875    79.6 N    132.0 E    4.5
                   24      49.6     348.3   07-08-36.0    06-59-41
.3   ZJVKSDJOEL                                           40 ARCT
IC ZONE                               654 EAST OF SEVERNAYA ZEMLYA

242  1070 F3 68  1 19 2439875 79.6 N 132.0 E 40 654 24.  24
   49.6    348.3  7   8 36.0  6 59 41.3  1070 BM     68/01/19
  2439875    79.6 N    132.0 E    4.5
                   24      49.6     348.3   07-08-36.0    06-59-41
.3   ZJVKSDJOEL                                           40 ARCT
IC ZONE                               654 EAST OF SEVERNAYA ZEMLYA

242  1070 F4 68  1 19 2439875 79.6 N 132.0 E 40 654 24.  24
   49.6    348.3  7   8 36.0  6 59 41.3  1070 BM     68/01/19
  2439875    79.6 N    132.0 E    4.5
                   24      49.6     348.3   07-08-36.0    06-59-41
.3   ZJVKSDJOEL                                           40 ARCT
IC ZONE                               654 EAST OF SEVERNAYA ZEMLYA

243  1073 BM 68  1 19 2439875 44.8 N 148.4 E 19 221 33.  33
   67.7    312.2 16 15 58.0 16  4 57.1  1073 BM     68/01/19
  2439875    44.8 N    148.4 E    4.7
                   33      67.7     312.2   16-15-58.0    16-04-57
.1   BRSFPVFVLO                                           19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

243  1073 F1 68  1 19 2439875 44.8 N 148.4 E 19 221 33.  33
   67.7    312.2 16 15 58.0 16  4 57.1  1073 BM     68/01/19
  2439875    44.8 N    148.4 E    4.7
                   33      67.7     312.2   16-15-58.0    16-04-57
.1   BRSFPVFVLO                                           19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

243  1073 F2 68  1 19 2439875 44.8 N 148.4 E 19 221 33.  33
   67.7    312.2 16 15 58.0 16  4 57.1  1073 BM     68/01/19
  2439875    44.8 N    148.4 E    4.7
                   33      67.7     312.2   16-15-58.0    16-04-57
.1   BRSFPVFVLO                                           19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

243  1073 F3 68  1 19 2439875 44.8 N 148.4 E 19 221 33.  33
   67.7    312.2 16 15 58.0 16  4 57.1  1073 BM     68/01/19
  2439875    44.8 N    148.4 E    4.7
                   33      67.7     312.2   16-15-58.0    16-04-57
.1   BRSFPVFVLO                                           19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

243  1073 F4 68  1 19 2439875 44.8 N 148.4 E 19 221 33.  33
   67.7    312.2 16 15 58.0 16  4 57.1  1073 BM     68/01/19
  2439875    44.8 N    148.4 E    4.7
                   33      67.7     312.2   16-15-58.0    16-04-57
.1   BRSFPVFVLO                                           19 JAPA
N - KURILES - KAMCHATKA       221 KURILE ISLANDS

244  1088 BM 68  1 22 2439878 36.6 N  47.3 E 29 345 33.  33
   93.7     21.0 20 47 38.4 20 34 18.7  1088 BM     68/01/22
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   2439878    36.6 N    047.3 E    4.8
                     33      93.7        21.0   20-47-38.4    20-34-18
.7    FRUQSJIGYL                                              29 WEST
ERN ASIA                          345 NORTHWESTERN IRAN

244  1088 F1 68  1 22 2439878 36.6 N  47.3 E 29 345 33.  33
   93.7    21.0 20 47 38.4 20 34 18.7  1088 BM    68/01/22
  2439878   36.6 N   047.3 E    4.8
                     33      93.7        21.0   20-47-38.4    20-34-18
.7    FRUQSJIGYL                                              29 WEST
ERN ASIA                          345 NORTHWESTERN IRAN

244  1088 F2 68  1 22 2439878 36.6 N  47.3 E 29 345 33.  33
   93.7    21.0 20 47 38.4 20 34 18.7  1088 BM    68/01/22
  2439878   36.6 N   047.3 E    4.8
                     33      93.7        21.0   20-47-38.4    20-34-18
.7    FRUQSJIGYL                                              29 WEST
ERN ASIA                          345 NORTHWESTERN IRAN

244  1088 F3 68  1 22 2439878 36.6 N  47.3 E 29 345 33.  33
   93.7    21.0 20 47 38.4 20 34 18.7  1088 BM    68/01/22
  2439878   36.6 N   047.3 E    4.8
                     33      93.7        21.0   20-47-38.4    20-34-18
.7    FRUQSJIGYL                                              29 WEST
ERN ASIA                          345 NORTHWESTERN IRAN

244  1088 F4 68  1 22 2439878 36.6 N  47.3 E 29 345 33.  33
   93.7    21.0020 47 38.4 20 34 18.7  1088 BM    68/01/22
  2439878   36.6 N   047.3 E    4.8
                     33      93.7        21.0   20-47-38.4    20-34-18
.7    FRUQSJIGYL                                              29 WEST
ERN ASIA                          345 NORTHWESTERN IRAN

245  1111 BM 68  1 29 2439885 38.8 N  71.2 E 48 717225. 225
   94.8      2.0  5 13 20.4  4 59 55.6  1111 BM    68/01/29
  2439885   38.8 N   071.2 E    5.7
                    225      94.8         2.0   05-13-20.4    04-59-55
.6    IQKTGSJTLH                                              48 HIND
U KUSH AND PAMIR                  717 AFGHANISTAN-USSR BORDER REG
ION
245  1111 F1 68  1 29 2439885 38.8 N  71.2 E 48 717225. 225
   94.8      2.0  5 13 20.4  4 59 55.6  1111 BM    68/01/29
  2439885   38.8 N   071.2 E    5.7
                    225      94.8         2.0   05-13-20.4    04-59-55
.6    IQKTGSJTLH                                              48 HIND
U KUSH AND PAMIR                  717 AFGHANISTAN-USSR BORDER REG
ION
245  1111 F2 68  1 29 2439885 38.8 N  71.2 E 48 717225. 225
   94.8      2.0  5 13 20.4  4 59 55.6  1111 BM    68/01/29
  2439885   38.8 N   071.2 E    5.7
                    225      94.8         2.0   05-13-20.4    04-59-55
.6    IQKTGSJTLH                                              48 HIND
U KUSH AND PAMIR                  717 AFGHANISTAN-USSR BORDER REG
ION
245  1111 F3 68  1 29 2439885 38.8 N  71.2 E 48 717225. 225
   94.8      2.0  5 13 20.4  4 59 55.6  1111 BM    68/01/29
  2439885   38.8 N   071.2 E    5.7
                    225      94.8         2.0   05-13-20.4    04-59-55
.6    IQKTGSJTLH                                              48 HIND
U KUSH AND PAMIR                  717 AFGHANISTAN-USSR BORDER REG
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TUN
245  1111 F4 68   1 29 2439885 38.8 N   71.2 E 48 717225. 225
   94.8        2.0   5 13 20.4   4 59 55.6  1111 BM     68/01/29
  2439885    38.8 N    071.2 E    5.7
                   225     94.8        2.0   05-13-20.4   04-59-55
.6   IQKTGSJILH                                               48 HIND
U KUSH AND PAMIR                  717 AFGHANISTAN-USSR BORDER REG
ION
246  1113 BM 68   1 29 2439885 43.3 N 145.2 E 19 224 40.  40
   70.3    312.8 10 30 11.0 10 18 53.6  1113 BM     68/01/29
  2439885    43.3 N    145.2 E    6.3
                    40     70.3     312.8   10-30-11.0   10-18-53
.6   TVPLZCKOCD                                               19 JAPA
N - KURILES - KAMCHATKA          224 HOKKAIDO, JAPAN, REGION

246  1113 F1 68   1 29 2439885 43.3 N 145.2 E 19 224 40.  40
   70.3    312.8 10 30 11.0 10 18 53.6  1113 BM     68/01/29
  2439885    43.3 N    145.2 E    6.3
                    40     70.3     312.8   10-30-11.0   10-18-53
.6   TVPLZCKOCD                                               19 JAPA
N - KURILES - KAMCHATKA          224 HOKKAIDO, JAPAN, REGION

246  1113 F2 68   1 29 2439885 43.3 N 145.2 E 19 224 40.  40
   70.3    312.8 10 30 11.0 10 18 53.6  1113 BM     68/01/29
  2439885    43.3 N    145.2 E    6.3
                    40     70.3     312.8   10-30-11.0   10-18-53
.6   TVPLZCKOCD                                               19 JAPA
N - KURILES - KAMCHATKA          224 HOKKAIDO, JAPAN, REGION

246  1113 F3 68   1 29 2439885 43.3 N 145.2 E 19 224 40.  40
   70.3    312.8 10 30 11.0 10 18 53.6  1113 BM     68/01/29
  2439885    43.3 N    145.2 E    6.3
                    40     70.3     312.8   10-30-11.0   10-18-53
.6   TVPLZCKOCD                                               19 JAPA
N - KURILES - KAMCHATKA          224 HOKKAIDO, JAPAN, REGION

246  1113 F4 68   1 29 2439885 43.3 N 145.2 E 19 224 40.  40
   70.3    312.8 10 30 11.0 10 18 53.6  1113 BM     68/01/29
  2439885    43.3 N    145.2 E    6.3
                    40     70.3     312.8   10-30-11.0   10-18-53
.6   TVPLZCKOCD                                               19 JAPA
N - KURILES - KAMCHATKA          224 HOKKAIDO, JAPAN, REGION

247  1201 BM 68   2   6 2439893 55.8 N 160.6 E 19 217 33.  33
   54.7    316.4   6 55 10.6   6 45 37.6  1201 BM     68/02/06
  2439893    55.8 N    160.6 E    4.8
                    33     54.7     316.4   06-55-10.6   06-45-37
.6   CWYELQKIOT                                               19 JAPA
N - KURILES - KAMCHATKA          217 KAMCHATKA

247  1201 F1 68   2   6 2439893 55.8 N 160.6 E 19 217 33.  33
   54.7    316.4   6 55 10.6   6 45 37.6  1201 BM     68/02/06
  2439893    55.8 N    160.6 E    4.8
                    33     54.7     316.4   06-55-10.6   06-45-37
.6   CWYELQKIOT                                               19 JAPA
N - KURILES - KAMCHATKA          217 KAMCHATKA

247  1201 F2 68   2   6 2439893 55.8 N 160.6 E 19 217 33.  33
   54.7    316.4   6 55 10.6   6 45 37.6  1201 BM     68/02/06
  2439893    55.8 N    160.6 E    4.8
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                    33     54.7     316.4   06-55-10.6   06-45-37
.6   CWYFLOKIOT                                          19 JAPA
N - KURILES - KAMCHATKA        217 KAMCHATKA

247  1201 F3 68  2  6 2439893 55.8 N 160.6 E 19 217 33.  33
   54.7    316.4  6 55 10.6  6 45 37.6  1201 BM     68/02/06
  2439893   55.8 N    160.6 E    4.8
                    33     54.7     316.4   06-55-10.6   06-45-37
.6   CWYELOKIOT                                          19 JAPA
N - KURILES - KAMCHATKA        217 KAMCHATKA

247  1201 F4 68  2  6 2439893 55.8 N 160.6 E 19 217 33.  33
   54.7    316.4  6 55 10.6  6 45 37.6  1201 BM     68/02/06
  2439893   55.8 N    160.6 E    4.8
                    33     54.7     316.4   06-55-10.6   06-45-37
.6   CWYFLOKIOT                                          19 JAPA
N - KURILES - KAMCHATKA        217 KAMCHATKA

248  1104 BM 68  1 27 2439883 41.7 N  71.7 E 48 716 15.  15
   91.9      1.6  2 35 10.6  2 21 59.2  1104 BM     68/01/27
  2439883   41.7 N    071.7 E    4.8
                    15     91.9       1.6   02-35-10.6   02-21-59
.2   IDBHHGLYMC                                          48 HIND
U KUSH AND PAMIR               716 KIRGIZ SSR

248  1104 F1 68  1 27 2439883 41.7 N  71.7 E 48 716 15.  15
   91.9      1.6  2 35 10.6  2 21 59.2  1104 BM     68/01/27
  2439883   41.7 N    071.7 E    4.8
                    15     91.9       1.6   02-35-10.6   02-21-59
.2   IDBHHQLYMC                                          48 HIND
U KUSH AND PAMIR               716 KIRGIZ SSR

248  1104 F2 68  1 27 2439883 41.7 N  71.7 E 48 716 15.  15
   91.9      1.6  2 35 10.6  2 21 59.2  1104 BM     68/01/27
  2439983   41.7 N    071.7 E    4.8
                    15     91.9       1.6   02-35-10.6   02-21-59
.2   IDBHHGLYMC                                          48 HIND
U KUSH AND PAMIR               716 KIRGIZ SSR

248  1104 F3 68  1 27 2439883 41.7 N  71.7 E 48 716 15.  15
   91.9      1.6  2 35 10.6  2 21 59.2  1104 BM     68/01/27
  2439883   41.7 N    071.7 E    4.8
                    15     91.9       1.6   02-35-10.6   02-21-59
.2   IDBHHGLYMC                                          48 HIND
U KUSH AND PAMIR               716 KIRGIZ SSR

248  1104 F4 68  1 27 2439883 41.7 N  71.7 E 48 716 15.  15
   91.9      1.6  2 35 10.6  2 21 59.2  1104 BM     68/01/27
  2439883   41.7 N    071.7 E    4.8
                    15     91.9       1.6   02-35-10.6   02-21-59
.2   IDBHHQLYMC                                          48 HIND
U KUSH AND PAMIR               716 KIRGIZ SSR

249  1114 BM 68  1 29 2439885 41.8 N 144.9 E 19 224 33.  33
   71.6    311.9 10 53 14.0 10 41 48.5  1114 BM     68/01/29
  2439885   41.8 N    144.9 E    5.2
                    33     71.6     311.9   10-53-14.0   10-41-48
.5   VBHFKSNLYW                                          19 JAPA
N - KURILES - KAMCHATKA        224 HOKKAIDO, JAPAN, REGION
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249  1114 F1 68  1 29 2439885 41.8 N 144.9 E 19 224 33.  33
   71.6   311.9 10 53 14.0 10 41 48.5  1114 BM    68/01/29
  2439885   41.8 N    144.9 E   5.2
                 33    71.6    311.9   10-53-14.0   10-41-48
.5   VBHFKSQLYW                                     19 JAPA
N - KURILES - KAMCHATKA      224 HOKKAIDO, JAPAN, REGION

249  1114 F2 68  1 29 2439885 41.8 N 144.9 E 19 224 33.  33
   71.6   311.9 10 53 14.0 10 41 48.5  1114 BM    68/01/29
  2439885   41.8 N    144.9 E   5.2
                 33    71.6    311.9   10-53-14.0   10-41-48
.5   VBHFKSQLYW                                     19 JAPA
N - KURILES - KAMCHATKA      224 HOKKAIDO, JAPAN, REGION

249  1114 F3 68  1 29 2439885 41.8 N 144.9 E 19 224 33.  33
   71.6   311.9 10 53 14.0 10 41 48.5  1114 BM    68/01/29
  2439885   41.8 N    144.9 E   5.2
                 33    71.6    311.9   10-53-14.0   10-41-48
.5   VBHFKSQLYW                                     19 JAPA
N - KURILES - KAMCHATKA      224 HOKKAIDO, JAPAN, REGION

249  1114 F4 68  1 29 2439885 41.8 N 144.9 E 19 224 33.  33
   71.6   311.9 10 53 14.0 10 41 48.5  1114 BM    68/01/29
  2439885   41.8 N    144.9 E   5.2
                 33    71.6    311.9   10-53-14.0   10-41-48
.5   VBHFKSQLYW                                     19 JAPA
N - KURILES - KAMCHATKA      224 HOKKAIDO, JAPAN, REGION

250  1117 BM 68  1 29 2439885 44.3 N 146.7 E 19 221 33.  33
   68.9   312.7 11 47 41.9 11 36 33.7  1117 BM    68/01/29
  2439885   44.3 N    146.7 E   4.6
                 33    68.9    312.7   11-47-41.9   11-36-33
.7   QBSGHLDPUG                                     19 JAPA
N - KURILES - KAMCHATKA      221 KURILE ISLANDS

250  1117 F1 68  1 29 2439885 44.3 N 146.7 E 19 221 33.  33
   68.9   312.7 11 47 41.9 11 36 33.7  1117 BM    68/01/29
  2439885   44.3 N    146.7 E   4.6
                 33    68.9    312.7   11-47-41.9   11-36-33
.7   QBSGHLDPUG                                     19 JAPA
N - KURILES - KAMCHATKA      221 KURILE ISLANDS

250  1117 F2 68  1 29 2439885 44.3 N 146.7 E 19 221 33.  33
   68.9   312.7 11 47 41.9 11 36 33.7  1117 BM    68/01/29
  2439885   44.3 N    146.7 E   4.6
                 33    68.9    312.7   11-47-41.9   11-36-33
.7   QBSGHLDPUG                                     19 JAPA
N - KURILES - KAMCHATKA      221 KURILE ISLANDS

250  1117 F3 68  1 29 2439885 44.3 N 146.7 E 19 221 33.  33
   68.9   312.7 11 47 41.9 11 36 33.7  1117 BM    68/01/29
  2439885   44.3 N    146.7 E   4.6
                 33    68.9    312.7   11-47-41.9   11-36-33
.7   QBSGHLDPUG                                     19 JAPA
N - KURILES - KAMCHATKA      221 KURILE ISLANDS

250  1117 F4 68  1 29 2439885 44.3 N 146.7 E 19 221 33.  33
   68.9   312.7 11 47 41.9 11 36 33.7  1117 BM    68/01/29
  2439885   44.3 N    146.7 E   4.6
                 33    68.9    312.7   11-47-41.9   11-36-33
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.7   QBSGHLDPUG                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS


251  1118 BM 68  1 29 2439885 44.0 N 146.2 E 19 221 33.  33
  69.3   312.8 11 55  4.0 11 43 52.9  1118 BM     68/01/29
 2439885   44.0 N   146.2 E   5.5
                 33    69.3    312.8   11-55-04.0   11-43-52.
9   OEHCZSHLDQ                                              19 JAPAN
 - KURILES - KAMCHATKA        221 KURILE ISLANDS

251  1118 F1 68  1 29 2439885 44.0 N 146.2 E 19 221 33.  33
   69.3   312.8 11 55  4.0 11 43 52.9  1118 BM     68/01/29
  2439885   44.0 N   146.2 E   5.5
                 33    69.3    312.8   11-55-04.0   11-43-52
.9   OEHCZSHLDQ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

251  1118 F2 68  1 29 2439885 44.0 N 146.2 E 19 221 33.  33
   69.3   312.8 11 55  4.0 11 43 52.9  1118 BM     68/01/29
  2439885   44.0 N   146.2 E   5.5
                 33    69.3    312.8   11-55-04.0   11-43-52
.9   OEHCZSHLDQ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

251  1118 F3 68  1 29 2439885 44.0 N 146.2 E 19 221 33.  33
   69.3   312.8 11 55  4.0 11 43 52.9  1118 BM     68/01/29
  2439885   44.0 N   146.2 E   5.5
                 33    69.3    312.8   11-55-04.0   11-43-52
.9   OEHCZSHLDQ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

251  1118 F4 68  1 29 2439885 44.0 N 146.2 E 19 221 33.  33
   69.3   312.8 11 55  4.0 11 43 52.9  1118 BM     68/01/29
  2439885   44.0 N   146.2 E   5.5
                 33    69.3    312.8   11-55-04.0   11-43-52
.9   OEHCZSHLDQ                                              19 JAPA
N - KURILES - KAMCHATKA        221 KURILE ISLANDS

252  1119 BM 69  1 29 2439885 42.6 N 147.3 E 19 225 33.  33
   69.8   311.1 12 18 14.0 12  7   .3  1119 BM     68/01/29
  2439885   42.6 N   147.3 E   4.9
                 33    69.8    311.1   12-18-14.0   12-07-00
.3   RICIIVMORL                                              19 JAPA
N - KURILES - KAMCHATKA        225 OFF COAST OF HOKKAIDO, JAPA
N
252  1119 F1 68  1 29 2439885 42.6 N 147.3 E 19 225 33.  33
   69.8   311.1 12 18 14.0 12  7   .3  1119 BM     68/01/29
  2439885   42.6 N   147.3 E   4.9
                 33    69.8    311.1   12-18-14.0   12-07-00
.3   RICIIVMORL                                              19 JAPA
N - KURILES - KAMCHATKA        225 OFF COAST OF HOKKAIDO, JAPA
N
252  1119 F2 68  1 29 2439885 42.6 N 147.3 E 19 225 33.  33
   69.8   311.1 12 18 14.0 12  7   .3  1119 BM     68/01/29
  2439885   42.6 N   147.3 E   4.9
                 33    69.8    311.1   12-18-14.0   12-07-00
.3   RICIIVMORL                                              19 JAPA
N - KURILES - KAMCHATKA        225 OFF COAST OF HOKKAIDO, JAPA
N
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252  1119 F3 68  1 29 2439885 42.6 N 147.3 E 19 225 33.  33
   69.8   311.1 12 18 14.0 12  7   .3  1119 BM    68/01/29
  2439885   42.6 N   147.3 E   4.9
                   33    69.8    311.1   12-18-14.0   12-07-00
.3   RICIIVMORL                                        19 JAPA
N - KURILES - KAMCHATKA        225 OFF COAST OF HOKKAIDO, JAPA
N
252  1119 F4 68  1 29 2439885 42.6 N 147.3 E 19 225 33.  33
   69.8   311.1 12 18 14.0 12  7   .3  1119 BM    68/01/29
  2439885   42.6 N   147.3 E   4.9
                   33    69.8    311.1   12-18-14.0   12-07-00
.3   RICIIVMORL                                        19 JAPA
N - KURILES - KAMCHATKA        225 OFF COAST OF HOKKAIDO, JAPA
N
253  1132 BM 68  1 29 2439885 43.3 N 145.2 E 19 224 33.  33
   70.3   312.8 17 25 11.0 17 13 53.6  1132 BM    68/01/29
  2439885   43.3 N   145.2 E   4.7
                   33    70.3    312.8   17-25-11.0   17-13-53
.6   DQURJKRUJL                                        19 JAPA
N - KURILES - KAMCHATKA        224 HOKKAIDO, JAPAN, REGION

253  1132 F1 68  1 29 2439885 43.3 N 145.2 E 19 224 33.  33
   70.3   312.8 17 25 11.0 17 13 53.6  1132 BM    68/01/29
  2439885   43.3 N   145.2 E   4.7
                   33    70.3    312.8   17-25-11.0   17-13-53
.6   DQURJKRUJL                                        19 JAPA
N - KURILES - KAMCHATKA        224 HOKKAIDO, JAPAN, REGION

253  1132 F2 68  1 29 2439885 43.3 N 145.2 E 19 224 33.  33
   70.3   312.8 17 25 11.0 17 13 53.6  1132 BM    68/01/29
  2439885   43.3 N   145.2 E   4.7
                   33    70.3    312.8   17-25-11.0   17-13-53
.6   DQURJKRUJL                                        19 JAPA
N - KURILES - KAMCHATKA        224 HOKKAIDO, JAPAN, REGION

253  1132 F3 68  1 29 2439885 43.3 N 145.2 E 19 224 33.  33
   70.3   312.8 17 25 11.0 17 13 53.6  1132 BM    68/01/29
  2439885   43.3 N   145.2 E   4.7
                   33    70.3    312.8   17-25-11.0   17-13-53
.6   DQURJKRUJL                                        19 JAPA
N - KURILES - KAMCHATKA        224 HOKKAIDO, JAPAN, REGION

253  1132 F4 68  1 29 2439885 43.3 N 145.2 E 19 224 33.  33
   70.3   312.8 17 25 11.0 17 13 53.6  1132 BM    68/01/29
  2439885   43.3 N   145.2 E   4.7
                   33    70.3    312.8   17-25-11.0   17-13-53
.6   DQURJKRUJL                                        19 JAPA
N - KURILES - KAMCHATKA        224 HOKKAIDO, JAPAN, REGION

254  1131 BM 68  1 29 2439885 42.7 N 145.8 E 19 224 33.  33
   70.5   312.0 16 53 55.0 16 42 36.6  1131 BM    68/01/29
  2439885   42.7 N   145.8 E   6.0
                   33    70.5    312.0   16-53-55.0   16-42-36
.6   EGOQMLIRDW                                        19 JAPA
N - KURILES - KAMCHATKA        224 HOKKAIDO, JAPAN, REGION

254  1131 F1 68  1 29 2439885 42.7 N 145.8 E 19 224 33.  33
   70.5   312.0 16 53 55.0 16 42 36.6  1131 BM    68/01/29
  2439885   42.7 N   145.8 E   6.0
                   33    70.5    312.0   16-53-55.0   16-42-36
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.6   EGOQMLTRDW                                              19 JAPA
N - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

254  1131 F2 68  1 29 2439885 42.7 N 145.8 E 19 224 33.  33
   70.5    312.0 16 53 55.0 16 42 36.6  1131 BM     68/01/29
  2439885   42.7 N   145.8 E   6.0
                  33    70.5    312.0   16-53-55.0   16-42-36
.6   EGOQMLTRDW                                              19 JAPA
N - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

254  1131 F3 68  1 29 2439885 42.7 N 145.8 E 19 224 33.  33
   70.5    312.0 16 53 55.0 16 42 36.6  1131 BM     68/01/29
  2439885   42.7 N   145.8 E   6.0
                  33    70.5    312.0   16-53-55.0   16-42-36
.6   EGOQMLTRDW                                              19 JAPA
N - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

254  1131 F4 68  1 29 2439885 42.7 N 145.8 E 19 224 33.  33
   70.5    312.0 16 53 55.0 16 42 36.6  1131 BM     68/01/29
  2439885   42.7 N   145.8 E   6.0
                  33    70.5    312.0   16-53-55.0   16-42-36
.6   EGOQMLTRDW                                              19 JAPA
N - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

255  1130 BM 68  1 29 2439885 44.3 N 145.4 E 19 224 33.  33
   69.5    313.4 16 15 19.0 16  4  6.8  1130 BM     68/01/29
  2439885   44.3 N   145.4 E   4.6
                  33    69.5    313.4   16-15-19.0   16-04-06
.8   VCKBKJZQLV                                              19 JAPA
N - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

255  1130 F1 68  1 29 2439885 44.3 N 145.4 E 19 224 33.  33
   69.5    313.4 16 15 19.0 16  4  6.8  1130 BM     68/01/29
  2439885   44.3 N   145.4 E   4.6
                  33    69.5    313.4   16-15-19.0   16-04-06
.8   VCKBKJZQLV                                              19 JAPA
N - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

255  1130 F2 68  1 29 2439885 44.3 N 145.4 E 19 224 33.  33
   69.5    313.4 16 15 19.0 16  4  6.8  1130 BM     68/01/29
  2439885   44.3 N   145.4 E   4.6
                  33    69.5    313.4   16-15-19.0   16-04-06
.8   VCKBKJZQLV                                              19 JAPA
N - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

255  1130 F3 68  1 29 2439885 44.3 N 145.4 E 19 224 33.  33
   69.5    313.4 16 15 19.0 16  4  6.8  1130 BM     68/01/29
  2439885   44.3 N   145.4 E   4.6
                  33    69.5    313.4   16-15-19.0   16-04-06
.8   VCKBKJZQLV                                              19 JAPA
N - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

255  1130 F4 68  1 29 2439885 44.3 N 145.4 E 19 224 33.  33
   69.5    313.4 16 15 19.0 16  4  6.8  1130 BM     68/01/29
  2439885   44.3 N   145.4 E   4.6
                  33    69.5    313.4   16-15-19.0   16-04-06
.8   VCKBKJZQLV                                              19 JAPA
N - KURILES - KAMCHATKA       224 HOKKAIDO, JAPAN, REGION

256  1159 BM 68  1 30 2439886 36.0 N  70.6 E 53 718205. 205
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   97.6      2.6  8 30 45.1  9 17  7.9  1159 BM    68/01/30
  2439886   36.0 N    070.6 E    5.4
                 205    97.6      2.6   08-30-45.1   08-17-07
.9   IZLQRIBCEF                                      53 G RE
G = 718 AND D GT 70          718 HINDU KUSH REGION

256  1159 F1 68  1 30 2439886 36.0 N  70.6 E 53 718205. 205
   97.6      2.6  8 30 45.1  8 17  7.9  1159 BM    68/01/30
  2439886   36.0 N    070.6 E    5.4
                 205    97.6      2.6   08-30-45.1   08-17-07
.9   IZLQRIBCEF                                      53 G RE
G = 718 AND D GT 70          718 HINDU KUSH REGION

256  1159 F2 68  1 30 2439886 36.0 N  70.6 E 53 718205. 205
   97.6      2.6  8 30 45.1  8 17  7.9  1159 BM    68/01/30
  2439886   36.0 N    070.6 E    5.4
                 205    97.6      2.6   08-30-45.1   08-17-07
.9   IZLQRIBCEF                                      53 G RE
G = 718 AND D GT 70          718 HINDU KUSH REGION

256  1159 F3 68  1 30 2439886 36.0 N  70.6 E 53 718205. 205
   97.6      2.6  8 30 45.1  8 17  7.9  1159 BM    68/01/30
  2439886   36.0 N    070.6 E    5.4
                 205    97.6      2.6   08-30-45.1   08-17-07
.9   IZLQRIBCEF                                      53 G RE
G = 718 AND D GT 70          718 HINDU KUSH REGION

256  1159 F4 68  1 30 2439886 36.0 N  70.6 E 53 718205. 205
   97.6      2.6  8 30 45.1  8 17  7.9  1159 BM    68/01/30
  2439886   36.0 N    070.6 E    5.4
                 205    97.6      2.6   08-30-45.1   08-17-07
.9   IZLQRIBCEF                                      53 G RE
G = 718 AND D GT 70          718 HINDU KUSH REGION

257  1141 BM 68  1 30 2439886 44.1 N 147.7 E 19 221 33.  33
   68.5   312.0  1 41 23.0  1 30 17.0  1141 BM    68/01/30
  2439886   44.1 N    147.7 E    5.0
                  33    68.5    312.0   01-41-23.0   01-30-17
.0   RZBILQFSSS                                      19 JAPA
N - KURILES - KAMCHATKA      221 KURILE ISLANDS

257  1141 F1 68  1 30 2439886 44.1 N 147.7 E 19 221 33.  33
   68.5   312.0  1 41 23.0  1 30 17.0  1141 BM    68/01/30
  2439886   44.1 N    147.7 E    5.0
                  33    68.5    312.0   01-41-23.0   01-30-17
.0   RZBILQFSSS                                      19 JAPA
N - KURILES - KAMCHATKA      221 KURILE ISLANDS

257  1141 F2 68  1 30 2439886 44.1 N 147.7 E 19 221 33.  33
   68.5   312.0  1 41 23.0  1 30 17.0  1141 BM    68//1/30
  2439886   44.1 N    147.7 E    5.0
                  33    68.5    312.0   01-41-23.0   01-30-17
.0   RZBILQFSSS                                      19 JAPA
N - KURILES - KAMCHATKA      221 KURILE ISLANDS

257  1141 F3 68  1 30 2439886 44.1 N 147.7 E 19 221 33.  33
   68.5   312.0  1 41 23.0  1 30 17.0  1141 BM    68/01/30
  2439886   44.1 N    147.7 E    5.0
                  33    68.5    312.0   01-41-23.0   01-30-17
.0   RZBILQFSSS                                      19 JAPA
```

N - KURILES - KAMCHATKA 221 KURILE ISLANDS

257 1141 F4 68 1 30 2439886 44.1 N 147.7 E 19 221 33. 33
68.5 312.0 1 41 23.0 1 30 17.0 1141 BM 68/01/30
2439886 44.1 N 147.7 E 5.0
33 68.5 312.0 01-41-23.0 01-30-17
.0 RZBILGFSSS 19 JAPA
N - KURILES - KAMCHATKA 221 KURILE ISLANDS

258 1205 BM 68 2 6 2439893 55.8 N 160.6 E 19 217 33. 33
54.7 316.4 10 40 .3 10 30 27.3 1205 BM 68/02/06
2439893 55.8 N 160.6 E 4.2
33 54.7 316.4 10-40-00.3 10-30-27
.3 MGDKGCLQRZ 19 JAPA
N - KURILES - KAMCHATKA 217 KAMCHATKA

258 1205 F1 68 2 6 2439893 55.8 N 160.6 E 19 217 33. 33
54.7 316.4 10 40 .3 10 30 27.3 1205 BM 68/02/06
2439893 55.8 N 160.6 E 4.2
33 54.7 316.4 10-40-00.3 10-30-27
.3 MGDKGCLQRZ 19 JAPA
N - KURILES - KAMCHATKA 217 KAMCHATKA

258 1205 F2 68 2 6 2439893 55.8 N 160.6 E 19 217 33. 33
54.7 316.4 10 40 .3 10 30 27.3 1205 BM 68/02/06
2439893 55.8 N 160.6 E 4.2
33 54.7 316.4 10-40-00.3 10-30-27
.3 MGDKGCLQRZ 19 JAPA
N - KURILES - KAMCHATKA 217 KAMCHATKA

258 1205 F3 68 2 6 2439893 55.8 N 160.6 E 19 217 33. 33
54.7 316.4 10 40 .3 10 30 27.3 1205 BM 68/02/06
2439893 55.8 N 160.6 E 4.2
33 54.7 316.4 10-40-00.3 10-30-27
.3 MGDKGCLQRZ 19 JAPA
N - KURILES - KAMCHATKA 217 KAMCHATKA

258 1205 F4 68 2 6 2439893 55.8 N 160.6 E 19 217 33. 33
54.7 316.4 10 40 .3 10 30 27.3 1205 BM 68/02/06
2439893 55.8 N 160.6 E 4.2
33 54.7 316.4 10-40-00.3 10-30-27
.3 MGDKGCLQRZ 19 JAPA
N - KURILES - KAMCHATKA 217 KAMCHATKA

259 1207 BM 68 2 7 2439894 43.3 N 85.8 E 28 332 33. 33
89.7 351.3 1 35 56.2 1 22 54.9 1207 BM 68/02/07
2439894 43.3 N 085.8 E 4.2
33 89.7 351.3 01-35-56.2 01-22-54
.9 KIJOILIQZP 28 ALMA
-ATA TO LAKE BAIKAL 332 NORTHERN SINKIANG PROV., CH
INA
259 1207 F1 68 2 7 2439894 43.3 N 85.8 E 28 332 33. 33
89.7 351.3 1 35 56.2 1 22 54.9 1207 BM 68/02/07
2439894 43.3 N 085.8 E 4.2
33 89.7 351.3 01-35-56.2 01-22-54
.9 KIJOILIQZP 28 ALMA
-ATA TO LAKE BAIKAL 332 NORTHERN SINKIANG PROV., CH
INA
259 1207 F2 68 2 7 2439894 43.3 N 85.8 E 28 332 33. 33
89.7 351.3 1 35 56.2 1 22 54.9 1207 BM 68/02/07

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  2439894    43.3 N    085.8 E    4.2
                   33     89.7     351.3   01-35-56.2   01-22-54
.9   KIJOILIQZR                                          28 ALMA
-ATA TO LAKE BAIKAL          332 NORTHERN SINKIANG PROV., CH
INA
259  1207 F3 68  2  7 2439894 43.3 N  85.8 E 28 332 33.  33
   89.7    351.3  1 35 56.2  1 22 54.9  1207 BM    68/02/07
  2439894    43.3 N    085.8 E    4.2
                   33     89.7     351.3   01-35-56.2   01-22-54
.9   KIJOILIQZR                                          28 ALMA
-ATA TO LAKE BAIKAL          332 NORTHERN SINKIANG PROV., CH
INA
259  1207 F4 68  2  7 2439894 43.3 N  85.8 E 28 332 33.  33
   89.7    351.3  1 35 56.2  1 22 54.9  1207 BM    68/02/07
  2439894    43.3 N    085.8 E    4.2
                   33     89.7     351.3   01-35-56.2   01-22-54
.9   KIJOILIQZR                                          28 ALMA
-ATA TO LAKE BAIKAL          332 NORTHERN SINKIANG PROV., CH
INA
260  1209 BM 68  2  7 2439894 36.5 N  28.3 E 30 369158. 158
   87.6    35.0 22 34 48.9 22 21 57.8  1209 BM    68/02/07
  2439894    36.5 N    028.3 E    5.5
                  158     87.6      35.0   22-34-48.9   22-21-57
.8   QMPYLYVDPP                                          30 MIDD
LE EAST - CRIMEA - BALKANS   369 DODECANESE ISLANDS

260  1209 F1 68  2  7 2439894 36.5 N  28.3 E 30 369158. 158
   87.6    35.0 22 34 48.9 22 21 57.8  1209 BM    68/02/07
  2439894    36.5 N    028.3 E    5.5
                  158     87.6      35.0   22-34-48.9   22-21-57
.8   QMPYLYVDPP                                          30 MIDD
LE EAST - CRIMEA - BALKANS   369 DODECANESE ISLANDS

260  1209 F2 68  2  7 2439894 36.5 N  28.3 E 30 369158. 158
   87.6    35.0 22 34 48.9 22 21 57.8  1209 BM    68/02/07
  2439894    36.5 N    028.3 E    5.5
                  158     87.6      35.0   22-34-48.9   22-21-57
.8   QMPYLYVDPP                                          30 MIDD
LE EAST - CRIMEA - BALKANS   369 DODECANESE ISLANDS

260  1209 F3 68  2  7 2439894 36.5 N  28.3 E 30 369158. 158
   87.6    35.0 22 34 48.9 22 21 57.8  1209 BM    68/02/07
  2439894    36.5 N    028.3 E    5.5
                  158     87.6      35.0   22-34-48.9   22-21-57
.8   QMPYLYVDPP                                          30 MIDD
LE EAST - CRIMEA - BALKANS   369 DODECANESE ISLANDS

260  1209 F4 68  2  7 2439894 36.5 N  28.3 E 30 369158. 158
   87.6    35.0 22 34 48.9 22 21 57.8  1209 BM    68/02/07
  2439894    36.5 N    028.3 E    5.5
                  158     87.6      35.0   22-34-48.9   22-21-57
.8   QMPYLYVDPP                                          30 MIDD
LE EAST - CRIMEA - BALKANS   369 DODECANESE ISLANDS

261  1250 BM 68  3 17 2439933 78.0 N 140.0 E 42 667 30.  30
   49.3    345.4 17 55 52.1 17 46 59.6  1250 BM    68/03/17
  2439933    78.0 N    140.0 E    4.4
                   30     49.3     345.4   17-55-52.1   17-46-59
.6   MSUJZVTSQL                                          42 NORT
HEASTERN ASIA, NORTHERN ALAS 667 NORTH OF NEW SIBERIAN ISLAN
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DS
261  1250 F1 68  3 17 2439933 78.0 N 140.0 E 42 667 30.  30
   49.3    345.4 17 55 52.1 17 46 59.6  1250 BM     68/03/17
  2439933   78.0 N   140.0 E    4.4
                 30     49.3    345.4   17-55-52.1   17-46-59
.6   MSUJZVTSQL                                       42 NORT
HEASTERN ASIA, NORTHERN ALAS 667 NORTH OF NEW SIBERIAN ISLAN
DS
261  1250 F2 68  3 17 2439933 78.0 N 140.0 E 42 667 30.  30
   49.3    345.4 17 55 52.1 17 46 59.6  1250 BM     68/03/17
  2439933   78.0 N   140.0 E    4.4
                 30     49.3    345.4   17-55-52.1   17-46-59
.6   MSUJZVTSQL                                       42 NORT
HEASTERN ASIA, NORTHERN ALAS 667 NORTH OF NEW SIBERIAN ISLAN
DS
261  1250 F3 68  3 17 2439933 78.0 N 140.0 E 42 667 30.  30
   49.3    345.4 17 55 52.1 17 46 59.6  1250 BM     68/03/17
  2439933   78.0 N   140.0 E    4.4
                 30     49.3    345.4   17-55-52.1   17-46-59
.6   MSUJZVTSQL                                       42 NORT
HEASTERN ASIA, NORTHERN ALAS 667 NORTH OF NEW SIBERIAN ISLAN
DS
261  1250 F4 68  3 17 2439933 78.0 N 140.0 E 42 667 30.  30
   49.3    345.4 17 55 52.1 17 46 59.6  1250 BM     68/03/17
  2439933   78.0 N   140.0 E    4.4
                 30     49.3    345.4   17-55-52.1   17-46-59
.6   MSUJZVTSQL                                       42 NORT
HEASTERN ASIA, NORTHERN ALAS 667 NORTH OF NEW SIBERIAN ISLAN
DS
262  1224 BM 68  2 22 2439909 41.0 N  20.4 E 31 391 33.  33
   80.6     37.9 12 46 22.9 12 34  7.1  1224 BM     68/02/22
  2439909   41.0 N   020.4 E    4.1
                 33     80.6     37.9   12-46-22.9   12-34-07
.1   MVMHMRQWLJ                                       31 WEST
ERN MEDITERRANEAN AREA        391 ALBANIA

262  1224 F1 68  2 22 2439909 41.0 N  20.4 E 31 391 33.  33
   80.6     37.9 12 46 22.9 12 34  7.1  1224 BM     68/02/22
  2439909   41.0 N   020.4 E    4.1
                 33     80.6     37.9   12-46-22.9   12-34-07
.1   MVMHMRQWLJ                                       31 WEST
ERN MEDITERRANEAN AREA        391 ALBANIA

262  1224 F2 68  2 22 2439909 41.0 N  20.4 E 31 391 33.  33
   80.6     37.9 12 46 22.9 12 34  7.1  1224 BM     68/02/22
  2439909   41.0 N   020.4 E    4.1
                 33     80.6     37.9   12-46-22.9   12-34-07
.1   MVMHMRQWLJ                                       31 WEST
ERN MEDITERRANEAN AREA        391 ALBANIA

262  1224 F3 68  2 22 2439909 41.0 N  20.4 E 31 391 33.  33
   80.6     37.9 12 46 22.9 12 34  7.1  1224 BM     68/02/22
  2439909   41.0 N   020.4 E    4.1
                 33     80.6     37.9   12-46-22.9   12-34-07
.1   MVMHMRQWLJ                                       31 WEST
ERN MEDITERRANEAN AREA        391 ALBANIA

262  1224 F4 68  2 22 2439909 41.0 N  20.4 E 31 391 33.  33
   80.6     37.9 12 46 22.9 12 34  7.1  1224 BM     68/02/22
  2439909   41.0 N   020.4 E    4.1
```

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                    33     80.0      37.9    12-46-22.9    12-34-07
.1   MVMHMRQWLJ                                             31 WEST
ERN MEDITERRANEAN AREA        391 ALBANIA

263  1223 BM 68  2 22 2439909 40.7 N  20.6 E 31 392 33.  33
   80.9     38.0 12 34 58.2 12 22 40.7  1223 BM    68/02/22
  2439909    40.7 N   020.6 E    4.4
                    33     80.9      38.0    12-34-58.2    12-22-40
.7   LKEZQEBVBJ                                             31 WEST
ERN MEDITERRANEAN AREA        392 GREECE-ALBANIA BORDER REGIO
N
263  1223 F1 68  2 22 2439909 40.7 N  20.6 E 31 392 33.  33
   80.9     38.0 12 34 58.2 12 22 40.7  1223 BM    68/02/22
  2439909    40.7 N   020.6 E    4.4
                    33     80.9      38.0    12-34-58.2    12-22-40
.7   LKEZQEBVBJ                                             31 WEST
ERN MEDITERRANEAN AREA        392 GREECE-ALBANIA BORDER REGIO
N
263  1223 F2 68  2 22 2439909 40.7 N  20.6 E 31 392 33.  33
   80.9     38.0 12 34 58.2 12 22 40.7  1223 BM    68/02/22
  2439909    40.7 N   020.6 E    4.4
                    33     80.9      38.0    12-34-58.2    12-22-40
.7   LKEZQEBVBJ                                             31 WEST
ERN MEDITERRANEAN AREA        392 GREECE-ALBANIA BORDER REGIO
N
263  1223 F3 68  2 22 2439909 40.7 N  20.6 E 31 392 33.  33
   80.9     38.0 12 34 58.2 12 22 40.7  1223 BM    68/02/22
  2439909    40.7 N   020.6 E    4.4
                    33     80.9      38.0    12-34-58.2    12-22-40
.7   LKEZQEBVBJ                                             31 WEST
ERN MEDITERRANEAN AREA        392 GREECE-ALBANIA BORDER REGIO
N
263  1223 F4 68  2 22 2439909 40.7 N  20.6 E 31 392 33.  33
   80.9     38.0 12 34 58.2 12 22 40.7  1223 BM    68/02/22
  2439909    40.7 N   020.6 E    4.4
                    33     80.9      38.0    12-34-58.2    12-22-40
.7   LKEZQEBVBJ                                             31 WEST
ERN MEDITERRANEAN AREA        392 GREECE-ALBANIA BORDER REGIO
N
264  1035 BM 68  1 11 2439867 45.8 N 152.5 E 19 222 56.  56
   64.9    310.8 18 19  9.0 18  8 25.8  1035 BM    68/01/11
  2439867    45.8 N   152.5 E    5.0
                    56     64.9     310.8    18-19-09.0    18-08-25
.8   ORWELDIYQW                                             19 JAPA
N - KURILES - KAMCHATKA       222 KURILE ISLANDS REGION

264  1035 F1 68  1 11 2439867 45.8 N 152.5 E 19 222 56.  56
   64.9    310.8 18 19  9.0 18  8 25.8  1035 BM    68/01/11
  2439867    45.8 N   152.5 E    5.0
                    56     64.9     310.8    18-19-09.0    18-08-25
.8   ORWELDIYQW                                             19 JAPA
N - KURILES - KAMCHATKA       222 KURILE ISLANDS REGION
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